

U. of A.

UNIVERSITY SURVEY COMMITTEE

Interim Report
to the Lieutenant Governor in Council
Province of Alberta

Edmonton, Alberta
January 30, 1942

REF

ARCHIVES
LE
3
A577
U585
1942
c.2



EX LIBRIS
UNIVERSITATIS
ALBERTÆNSIS

UNIVERSITY SURVEY COMMITTEE

Interim Report

to the Lieutenant Governor in Council

Province of Alberta

Edmonton, Alberta

January 30, 1942

LETTER OF TRANSMITTAL

Edmonton, Alberta
January 30, 1942

The Honourable William Aberhart
Premier and Minister of Education
Parliament Buildings
Edmonton, Alberta

Sir:

We have the honour to submit an interim report on our survey of the University of Alberta.

Part I of this report covers the primary and Part II the secondary terms of reference in O.C. 1117/41. Part III is a summary of our recommendations. Part IV contains a draft plan for rehabilitating the University and expanding its work and facilities over a period of ten years, with an estimate of the costs involved.

A note on the Committee's procedure in conducting the survey, with a list of the submissions received, will be found in Appendix A of the report. An historical note on the University, together with a figure showing the annual student registration and annual Government grant from the outset to the present, will be found in Appendix B. A table of costs of various services, distributed to sources of revenue, is given in Appendix C.

As indicated in the report, there was not time to complete the investigation of certain questions coming within the scope of our terms of reference. We propose to continue our inquiry into these matters and make a further report.

We respectfully suggest that the re-writing of the University of Alberta Act should be taken in hand forthwith and that this Committee should be given the privilege of examining the draft.

We have the honour to be, Sir, the members of the University Survey Committee.

H. H. Parlee, Chairman

Robert Newton

G. Fred McHally

H. C. Newland

F. G. Winspear

John W. Barnett

TABLE OF CONTENTS

PART I

	Page
A. The place of the University in the educational system of the Province	1
1. Functions of a university	1
2. Co-ordination	4
(a) Matriculation	4
(b) Articulation	6
(c) Credits	6
3. Faculty of Education	6
4. Industrial arts and fine arts	8
5. Commerce and household economics	9
6. Length and arrangement of University session	10
7. Alumni responsibility	12
8. Student wastage	14
9. Central preliminary school of nursing	16
B. Whether the University can be made to serve more completely the cultural needs of all the people of the Province	19
1. Department of Extension	19
2. Junior colleges	21
3. Extra-mural courses	22
4. Scholarships	22
C. Whether it is possible to have the University function more effectively in the development of the agricultural and industrial resources of the Province	25
1. Research	25
2. Diploma course in dairy manufactures	32
3. Department of Chemical Engineering	33

PART II		Page
A. The University Act		35
Minority report on political freedom for members of the University staff		40
Minority report on constitution of Board of Governors, and method of appointing President		52a
B. Internal organisation and machinery of administration..		53
C. University finance		64
1. Sources of revenue		64
2. Student fees		65
3. Scholarships and gifts		68
4. Distribution of expenditures		69
5. Costs per student		73
6. Comparison with other institutions		75
7. Business management		78
8. Returns to the public		79
9. Medical education		80
10. Depression finance		82
(a) Plant		83
(b) Staff		83
(c) Research		84
11. Budgeting		87
D. Courses of study		88
E. Staff training and teaching loads		92
F. Activities of the University in research		96

PART III

Summary of Recommendations	Page
The University's place in educational system	106
The University to serve more people	108
Service to agriculture and industry	109
The University Act	109
Internal organization and administration	111
Finance	111
Courses of study	112
Staff	113

PART IV

Ten-Year Plan

A. Building expansion	115
B. Maintenance costs	120

APPENDICES

A. Procedure of survey, and list of submissions	124
B. University history, and contributions to science and letters	127
C. Costs of various services, distributed to sources of revenue	133

UNIVERSITY SURVEY COMMITTEE

Interim Report to the Lieutenant Governor in Council Province of Alberta

Part I

A. The Place of the University in the Educational System of the Province

1. Functions of a university

In an era of rapid political, economic and social change, it is not surprising that the place of the University in our educational system should be the subject of some diversity of opinion. How this was reflected in submissions made to the University Survey Committee may be illustrated by four cases in which formal statements of the authors' concepts of the function of a university were included.

a. The Faculty Relations Committee, in its submission to the Survey Committee, points out that universities have historically found themselves called upon to perform three main functions: (i) to provide a liberal education, (ii) to provide professional and vocational training, (iii) to advance knowledge by research. In regard to the first, the authors of this submission remark that, while there may be dispute as to the relative emphasis that should be placed on the natural sciences, the social sciences, and the arts, the important consideration is that the subject matter, whatever it be, should be regarded

from a broadly human point of view and so presented as to illumine as many regions or facets of human life as possible. They admit that "bookishness", in the sense of learning which is divorced from all concern with the live issues of individual and social living, has too often stultified the whole project of a liberal education. In regard to the second function of a university, they observe that the responsibility for providing professional and vocational training has greatly increased in modern times. As a means of distinguishing the proper share of the university in this work, the authors suggest it should be responsible only for the type of training in which a competent knowledge of basic principles is indispensable for efficient practice. Other types of vocational training should be provided elsewhere. Finally, in regard to the third function, research, they point out this no longer depends on haphazard, individual effort, but is the subject of carefully organized, co-operative effort, a given project often involving many workers in different parts of the world. The Faculty Relations Committee includes in its recommendations, one urging that the Province would be enriched if able young men and women, now debarred from university education by lack of financial means, were enabled to attend by the provision of more scholarships; and another expressing the desire of the staff generally to participate in public contacts, especially through the radio.

b. The Education Society of Edmonton states its belief that the functions of a university are: (1) to disseminate and advance higher learning, (11) to give the public

new light and information upon problems of personal and community living.

c. The University Women's Club, Edmonton, submits that the paramount task of a modern university is to train leaders for, and to give leadership in, the social development of the community that it serves.

d. A high school principal defined the main purpose of education as to give training in social living, something he feels more difficult of achievement than the application of science to the solution of physical problems. He thought that extra-curricular activities have made more contribution to the fulfilment of this purpose than has the conventional academic curriculum.

The submission of the Faculty Relations Committee reflects the viewpoint of university instructors accustomed to make their chief contribution to society through their intra-mural students, who on graduation carry the influence of their teaching to all quarters of the Province. The other submissions, from organizations or persons outside the University, stress more urgently the need for carrying the University directly to the people at large. Many submissions not cited here individually urged expansion of the activities of the Department of Extension, coupling these representations with expressions of appreciation of the work already being done by this Department and of the extension activities of the Faculty of Agriculture and certain other departments of the University. The Faculty Relations

Committee does not ignore this public responsibility - indeed it expressed the wish of the staff generally to share more fully in the discharge of this obligation - but it could not be expected to go the length of one organization which submitted that, "The first function of the University should be to act as the source of information and education, not for the students attending its lecture rooms, but for the inarticulate and un-informed public." Neither can the Survey Committee accept this extreme view, but it does agree that the University should take an increasingly active part in the adult education movement, with respect to the Province of Alberta.

2. Co-ordination

The co-ordination of the University with the high schools and normal schools of the Province was viewed from three aspects: (a) matriculation requirements, (b) articulation of subjects and methods of instruction (c) credit for normal courses.

(a) Matriculation. - Of the hundred high school credits required for University matriculation, 88 are specified and 12 are options to be selected by the student. Since only about 10% of the high school graduates go on to the University, the other 90% are theoretically free to select at least up to the 41 credits for optional subjects permitted by Normal School entrance requirements. In practice the University requirements tend to dominate, since most parents are anxious that their children should be qualified to enter that institution. Thus it happens not seldom that children who have no special

aptitude for mathematics, science, or languages, struggle with these courses when they might better select from the wider range of offerings available, some of which might fit them better for their place in society afterwards. The Committee recommends a return to the former system under which a student could pick up the third unit of mathematics and a foreign language, and the second unit of another science, at the University if necessary. This would open the way for more students to enter the University, a desirable thing in the opinion of this Committee.

With respect to matriculation to the Faculty of Education, the Committee recommends that this should be harmonized as closely as possible with the requirements for entrance to the Normal Schools. The number of university-trained teachers is insufficient to meet the needs of the Province's high schools, and every encouragement should be given qualified candidates to study for the Bachelor of Education degree. The Normal Schools and the Faculty of Education should be regarded as integral units in a progressive system of teacher training.

On the other hand, the Faculty of Education should not fall into the error of growing away from other University faculties. It is desirable that a large number of students should continue to take combined courses in Arts and Education, and that new combinations, such as Commerce and Education, Household Economics and Education, be developed. Candidates for these must satisfy the matriculation requirements of both schools concerned.

With respect to the Faculty of Applied Science, the

Committee suggests exploration of the question of giving matriculation credit for shop work done in the schools. It would appear that this should be feasible at least for entrance to mechanical engineering.

(b) Articulation. - A student progressing from a high school to the University should find opportunity to pursue further the special interests he has discovered in his high school work. Similarly one might reasonably expect a logical progression in methods of instruction. These are matters for continuous joint study by representatives of the Provincial Department of Education and the University. Direct personal contact between a representative of the University and high school students looking forward to university work, such as has been initiated to a limited extent by the Registrar, might profitably be widened.

(c) Credits. - The Committee proposes as a general principle that credit should be given for work which is relevant to the programme of the degree towards which a student is headed. Thus work done at a Normal School should earn some credit towards an Arts degree and still more credit towards an Education degree.

5. Faculty of Education

The Committee recommends that the College of Education be given faculty status forthwith. Heretofore the College has had full jurisdiction over its students only in the final year of a four-year combined course in Arts and Education. With the achievement of faculty status, the Bachelor of Education would become an independent degree, to be awarded either upon

the completion of a course of study in that faculty, or as the professional degree in a combined course with another faculty. The Faculty of Education would be built up by associating with the University Department of Education such other departments as might contribute courses to its curriculum; for example, Mathematics, Chemistry, English, History, Philosophy, Political Economy, Accounting, Household Economics. A number of departments belong to more than one faculty, and basic courses are often shared by students from several faculties.

Since the output of the College of Education has never been large enough to keep the high schools adequately supplied with teachers, it seems wise, on the one hand, not to make the course unduly long and, on the other hand, to provide intermediate stopping places for students who cannot afford to take the whole course at once. Different student groups might be accommodated by a two-year course leading to the junior diploma, a three-year course leading to the senior diploma (and the degree of Bachelor of Education for able students), and a four- or five-year course leading to combined degrees in two faculties. Students who had difficulty in completing the work for these diplomas or degrees in the minimum time might do so in some cases by attendance at summer sessions. For ambitious students there should be opportunity as at present to take graduate work, either in regular course or in summer session, for the degree of Master of Education.

The housing of the Faculty of Education presents an immediate problem. At present it is located in cramped quarters

rented by the University in St. Joseph's College. The Committee believes that it might be housed advantageously in the Edmonton Normal School building. This is a commodious structure, with several rooms as yet in an unfinished condition and never occupied. It is contiguous to the University, located indeed on what was originally part of the University's experimental grounds. Closer association of the Faculty of Education with the Normal School seems altogether desirable. As already stated, the Normal Schools and the Faculty of Education should be regarded as integral units in one system of teacher training. The imperative need of the Faculty of Education for a practice school could perhaps be met in large measure by co-operative use of the Normal Practice School.

The Normal School building is of course occupied by the Department of National Defence for the duration of the war, but will doubtless be available again afterwards.

4. Industrial Arts and Fine Arts

There were a number of submissions to the Survey Committee as to the desirability of establishing Departments of Industrial Arts and Fine Arts in the University, mainly for the purpose of training teachers of these subjects for the high schools. The Committee expects that the Faculty of Education will, when possible, make provision for practice teaching in the industrial arts as part of the programme of training for high school teachers. The Committee also directs attention to the opportunity for advanced training in both industrial and fine arts at the Provincial Institute of Technology and Art in Calgary.

Further reference to this matter will be made under the heading of "Junior Colleges".

Financial considerations make it impracticable to recommend the establishment of a Department of Fine Arts in the University at present. The Committee feels that new departments or enterprises should not be launched until a number of existing departments have been more adequately housed, equipped and staffed, unless such new enterprises are supported by grants from outside sources. The work of the Extension Department in art, music, and drama, supported by grants from the Carnegie Foundation, has contributed substantially to the cultural life of the Province. The Committee learned with satisfaction that the Rockefeller Foundation is now expressing interest in the support of drama instruction both within and without the University.

5. Commerce and Household Economics

Commerce and household economics are two more subjects in which advanced teacher training was advocated in a number of submissions. The Committee feels that this need should be met by the Faculty of Education in two ways: (a) by providing optional curricula leading to specialist certificates in one of these subjects; (b) by developing combined courses with the Schools of Commerce and Household Economics. Entrance to the combined courses should be encouraged by including in the liberalized matriculation requirements, to which reference has already been made, provision for more optional credit in high school subjects relevant to commerce and household economics. The

need cannot be fully met, however, until the School of Household Economics is more adequately housed and has a model practice home available. The comparative emphasis on dietetics now found in this School, owing to limitations of space and staff, could then be balanced by corresponding emphasis on household art and textiles and on the social aspects of home-making.

6. Growth and arrangement of University session

Having in view the congested state of the University and the cost of extending the plant, the Committee recommends that further study should be made of the feasibility of making fuller use of the existing plant by increasing to the maximum the part of the year during which it is in full operation. While it is clear to the Committee that the plant must be increased in size in order to accommodate the rising tide of student attendance (ebbing during the war, it is true, but probably only temporarily), it is also clear that so far as the scale of the increase in plant can be moderated by making more continuous use of the plant, it would be cheaper to engage the additional staff required by this alternative.

This recommendation is quite independent of the special sentiment in favour of continuous operation of the universities in war-time, which is now sweeping this continent. To this sentiment indeed the Committee readily subscribes, but in this report it is more concerned with long-range than with emergency measures. It cannot overlook, however, the probable inrush of students after the war, under the Dominion Government's

rehabilitation scheme. This seems likely to overtax existing accommodation, and new buildings cannot be erected at short notice, even were funds available. Thus it is especially pertinent to consider now any scheme for increasing the capacity of existing plants.

The quarter system, widely in use throughout American state universities, seems attractive. Under this system all courses are organized in units of approximately three months. Students may enter at the beginning of any quarter and withdraw at the end, without loss of credit. Those who must take a position to earn money before continuing may drop out for any number of quarters required to meet their need in this respect. Those in a financial position to do so may attend continuously throughout the year if they wish. Such a system would seem particularly applicable to the immediate post-war period, when students in receipt of rehabilitation support should attend continuously. It might be tried then experimentally (or sooner if the war emergency leads to continuous operation of the University) and continued thereafter if successful.

The Survey Committee recognizes that the University already conducts a summer session, and that furthermore the University is the scene of many other special and useful activities, such as Farm Boys' and Girls' Week, during the summer. Nevertheless, it recommends further, more detailed study of the question of keeping the University in full operation during a greater part of each year.

7. Alumni responsibility

The Alumni Association, in its submission to the Committee, deprecated the comparative lack of interest of its members in University affairs and suggested provision for a greater degree of recognition of the graduates as continuing members of the University organization. With this view the Committee fully concurs. A body of graduates already totalling some 6,000 should be a source of great strength to the University.

The Committee recommends that a more systematic effort should be made to inspire students with loyalty and a sense of responsibility towards the University, so that they go out as crusaders for their Alma Mater. Success in promoting such a spirit depends upon both the Administration and staff members individually. While the Administration must act firmly when occasion requires, it is felt that the aim should always be to deal with the students co-operatively rather than repressively. In the section of this Report dealing with organization and administration, the Committee calls attention to the special importance of the office of the Provost, the chief disciplinary officer of the University.

Besides cultivating a spirit of loyalty among the students, as a basis for Alumni support, there should be developed an active interest in the problems and government of the University. To this end the Committee recommends that the students should have direct representation on the Senate. Provision for this is included in the proposed revisions of the University Act.

Furthermore, to give more opportunity for expression of the desired interest in University affairs, the Committee recommends enlarging the representation of the Alumni Association on the Board of Governors, and continuing adequate representation on the Senate. These points are covered in the proposed revisions of the Act.

Finally, to provide the necessary machinery for a more closely knit Alumni Association and for building the Association more firmly into the structure of the University's life and work, the Committee recommends appointment by the University of a full-time Alumni Secretary. This officer should be resident in the University, with all the privileges and responsibilities of staff membership, subject to the usual control of the President and the Board of Governors, but without interference in the autonomy of the Alumni Association. The Secretary's duties would include that of keeping the Association fully informed with regard to both the progress and needs of the University.

The Alumni Association, for its part, should be prepared to take a more active and responsible share in promoting the welfare of the University. Primarily they should create public interest and favourable opinion concerning the University. The Committee notes, moreover, that similar associations, representing institutions no larger than the University of Alberta, have succeeded in raising independently large sums of money in support of their universities. The Association should also be in a favourable position to interest men of substance in the

needs of the University, for example, in providing more scholarships for able students who might otherwise be debarred from University attendance by lack of financial resources.

8. Student wastage

A few submissions to the Committee called attention to what was believed to be the excessive number of student failures, especially among freshmen.

The special machinery for the guidance of students at the University of Alberta takes the form of a Committee on Freshmen, supplemented by a considerable number of advisers selected from the staff. Representatives of the foregoing assist the student in making out a programme suitably integrated with his previous training and his proposed field of work. If he reports uncertainty as to his vocation he is usually sent for advice to several people both within and outside the University. In case of doubt with respect to any particular course he is referred for consultation to the representative of the department concerned. After registration the student is assigned to an adviser with whom he may confer at any time during the year. A weak point in the system is that the advisers show various degrees of interest and initiative in calling in the members of the small group of students assigned to them. A few may even leave it entirely to the students to take the initiative in coming to see them. Others of course perform their duties very conscientiously. Few of them, however, have any special training in modern methods of student guidance. This is something that might be rectified by encouraging members of the staff to

take summer courses in this field.

The data supplied by the Registrar did not show the percentage of failures to be larger in this University than in other similar institutions. There is some evidence of reduction in this percentage in recent years. Strictly speaking, "student wastage" should be defined as the failure of students of adequate intellectual ability as shown by their high school records and psychological tests. This distinguishes it from "student mortality", the loss of students from all causes, including unsuitability by aptitude or attitude for higher education. The Committee has not had time to make a detailed study of the degree of genuine wastage, but believes such a study would be worth carrying out. If students of average or above-average ability are failing, then other causes such as defective articulation of high school and university studies, poor teaching on the part of the staff, or failure to give proper guidance, must be looked for. These leave out of account the occasional student of good ability who just will not work, but such cases should not be very numerous. In justice it should be added that students who are required to withdraw because of course failures are permitted to return after the expiration of a year if they desire to do so. The continued difficulties of those who do return suggest that the system is actually weeding out poor students.

Leniency in the freshman year to students who have no genuine aptitude for university work is no kindness, since failure at a later stage is more serious. They should be

eliminated promptly for their own good and that of the University.

It is recognized that written examinations are by no means wholly reliable as a measure of the knowledge and ability of students. They seem however to be the best means available at present. Wisconsin studies have shown that a student's percentage rating in high school examinations is the best index of his probable success at the university. At the same time it has been found at the University of Chicago that the reliability of the system can be considerably enhanced by having all examination results reviewed by one man specially trained to spot and investigate anomalous cases. At the University of Alberta this function is performed for each faculty separately by a Revision Committee. It is felt that as soon as practicable this work should be placed under the supervision of a specialist in the science of educational measurement. This person should also be in charge of student guidance throughout the University.

The machinery for appeals by students should be simple, adequate, and clearly outlined in the University calendar. This is a subject the Committee proposes to explore more fully.

4. Central preliminary school of nursing

The Alberta Association of Registered Nurses, with the approval of the Canadian Nurses Association, submitted a plan for establishing at the University a central preliminary school of nursing, which might serve the needs of the entire Province. The purpose of the school would be to teach the sciences underlying nursing practice, such as anatomy, physiology, materia

medicine, psychology, nutrition, and health education. By centralizing this part of nursing training in one school, they argue that the teaching load on individual hospitals would be greatly lightened, leaving instructors free to devote their time to nursing arts and clinical practice. The plan would eliminate the maintenance of expensive laboratories by each hospital.

Tentatively the proponents of this scheme suggested two sessions per year, each of four months' duration, covering subjects normally taught in the first four months of hospital training. The period of hospital training could be shortened correspondingly. The quality of instruction should be improved, and the hospitals relieved of a load which many of them cannot carry adequately. Entrance requirements would be those of the hospitals, rather than full University matriculation.

They further propose that associated with the foregoing plan should be the development at the University of summer school work for graduate nurses, with credits towards a degree or diploma in hospital administration or public health nursing.

The cost of operating the school they suggest should be split three ways: (a) a grant from the Provincial Government, (b) a grant from each hospital now maintaining a training school, since they would be relieved of part of their burden, (c) fees paid by students.

The Survey Committee was favourably impressed by this scheme, which it understands is in line with progressive develop-

ments in a number of American institutions. Since, however, its proponents estimate an average class of 250 students, requiring large class-rooms and laboratories, it is manifestly impracticable to launch such a scheme without new building developments. When these can be provided, and the present School of Nursing is adequately housed, the Committee recommends that the proposal for a central preliminary school be re-examined.

B. Whether the University
can be made to serve more completely
the cultural needs of all the people of the Province

1. Department of Extension

On no point did the Survey Committee receive more submissions than on the importance of intensifying the work of the Department of Extension throughout the Province. Greater educational opportunities for the people at large are evidently much desired.

Education in co-operation, through the medium of study groups, short courses, special schools, and conferences, perhaps heads the list in popularity of demand. Sociology, economics, community life, community leadership, are other fields in which training is desired on the adult education level. Refresher courses for particular groups concerned with rural administration, co-operative and other enterprises, are also popular. Several briefs advocated increased use of the University radio station. Generally they asked also that the Department increase its activities as a distributing centre for information on adult education and co-operative education. Some briefs asked that the Department carry on its activities in co-operation with organizations interested in specific fields. Lectures and correspondence courses were also requested.

The Committee learned from the submission of the Director of the Department of Extension and from the printed annual reports of this Department, that all of the foregoing activities are already practised on a limited scale now. What

is needed to satisfy public demand is an expansion of these activities. There is of course no limit but such as is imposed by financial considerations to the amount of such work which might be carried on.

The Committee is heartily in favour of substantial expansion, but thinks part of this might well take the form of increasing the public contacts of the staff of other departments in the University. While the major portion of the work may always have to be done by the Extension Department directly, it is desirable to guard against building up in effect two universities, one serving the people at large and the other the intra-mural students. So far as possible the Extension Department should act as the organizing link between the whole University and the people. Already action has been taken, with the full concurrence of the staff, to revive the Committee on Radio Broadcasting and launch a more active programme over the air. The Survey Committee recommends that the Committee on Extension be similarly reactivated. While the potentialities of the radio make travel less necessary than formerly, a modicum of personal contact is desirable, and the Survey Committee recommends that the budget item for travelling expenses of staff members to outlying points in the Province be increased.

The Committee feels that the budget of the Department of Extension might reasonably be increased by at least one-third, and that its staff should be strengthened by adding an Assistant Director, an Agricultural Secretary, and at least one fully qualified instructor in Political Economy and Sociology. There appears to be room for co-operation between the Provincial Depart-

ment of Education and the University in the promotion and supervision of visual education, perhaps through a man appointed by the Department of Education and placed in the Department of Extension for liaison purposes.

2. Junior Colleges

Submissions received by the Committee with respect to the desirability of using the facilities of the Calgary Normal School and the Provincial Institute of Technology and Art for junior college purposes were favourably received. While the Committee believes that junior colleges should not be established without satisfactory assurance of adequate financial support and a high standard of instruction, this requirement should be amply fulfilled by these two institutions acting as a unit in junior college work.

That agreed, it seems altogether desirable to make the fullest possible use of existing facilities, thus relieving the pressure on University accommodation and lightening the burden of new building requirements. The pressure of new students is likely to increase substantially after the war, and may increase also as a result of the broadening of the basis of matriculation already recommended in this Report.

In process of time, the normal courses might themselves be extended to two years, with the inclusion of a number of additional Arts courses. Provided these were carefully integrated with the programme of the Faculty of Education, this action would make the Normal Schools in effect junior colleges, and accommodate a number of additional junior students. The

Calgary Normal School, because of its association with the Provincial Institute of Technology and Art, should be in a particularly favourable position to start students on the way to the Bachelor of Education degree with specialist standing in shop, industrial arts, or household economics.

The Survey Committee recommends, as a step towards further development of junior college work, early exploration of the feasibility of using for this purpose the combined facilities of the two Calgary institutions referred to.

3. Extra-mural courses

A number of submissions requested the establishment of extra-mural courses, in some cases for degree credit. While the Committee favours the organization of these courses by the Department of Extension where practicable, as part of the programme of adult education, it does not think the demand is sufficient to justify setting up correspondence courses for degree credit. Such courses are expensive to undertake, and the need seems to be reasonably met for the time being by Queen's University, which could probably not afford to carry them but for the fact that they operate across the whole country.

With a little more staff, the Faculty of Education should be able to conduct evening and Saturday morning classes for teachers at Edmonton, and possibly week-end classes in Calgary. For the present it does not seem practicable to contemplate more than this.

4. Scholarships

Time and again the Committee was confronted with the

great need for more scholarships, to overcome the anomalous situation in which comparative affluence is one of the pre-requisites to a university education. Here is "student wastage" on a grand scale. It is difficult to overemphasize the loss to society which it represents. We need scholarships, and more scholarships, to provide the needed opportunities for able but penurious students.

It has already been suggested that the Alumni Association is in an advantageous position to organize a search for more scholarships. True, they have a handicap to overcome in the wholly unjustifiable reluctance of many people to give or bequeath funds to state institutions. Surely we should take the more pride and interest in an institution because we have all a personal stake in it. It should be a patriotic duty of citizens who have flourished in Alberta to invest a modicum of their earnings in the future welfare of the Province. Potential scholarship donors might be encouraged to give more generously if the Provincial Government saw its way to matching private gifts for this purpose on a 50:50 basis. There is precedent or at least analogy for such action in the Youth Training scholarships supported jointly by the Dominion and Provincial Governments.

Further encouragement for donation of scholarship funds could be given by joint action on the part of all governments concerned with respect to exemption of gifts and bequeathed to educational institutions from income and inheritance taxes. At present gifts for educational purposes are exempted from

income tax only up to 10% of the income. The Dominion Succession Duties Act makes no exemptions for bequests for educational purposes. While the Provincial Succession Duties Act does exempt such bequests, the effect of this exemption is partly nullified by making bequests to other beneficiaries taxable at the rate applicable to the entire estate, including bequests to the University.

A revolving loan fund is another means of helping needy students, which is utilized only to a limited extent in this University. The Committee proposes to look into the operation of such funds in other places and the desirability of extending the system here.

C. Whether it is possible
to have the University function more effectively
in the development of the agricultural and industrial
resources of the Province

1. Research

"Knowledge keeps no better than fish", said Professor A. N. Whitehead. The world moves on, and those who do not move with it are simply left behind. In no department of life is this truer than in the domain of science and technology. The rate of obsolescence is here at a maximum. In a highly competitive world, where the efficiency of agricultural and industrial processes is being continually stepped up, the profitable development of natural resources depends in no small measure upon adequate and up-to-date knowledge. This can be supplied only by continual research.

The activities of the University in research are outlined in a later section of this Report under that heading. Here it will be appropriate to suggest some ways in which the University might be made to function more effectively in this regard.

First, it must be pointed out that not all departments of the University are being fully utilized. While funds for research were hard to come by, the tendency was not unnaturally to emphasize the things of obvious practical value, in "applied" departments, to the comparative neglect of the contribution which might be made by departments concerned either with so-called "pure sciences" or with the social sciences. It must

be remembered that the pure science fact of yesterday becomes the applied process of today, and that industrial applications can never travel far in advance of fundamental knowledge.

Similarly our technological progress has not of itself made a happy world. The social sciences must keep pace with the others if we are not to suffer grievous maladjustments. The Committee believes that a small annual grant earmarked for the encouragement of research, especially in those departments which have not ready access to funds from other sources, would be a highly profitable investment.

In agriculture the emphasis now is laid not so much on increasing production as on cutting costs, on improving quality, on increasing the efficiency of farm management and of marketing, on conserving the fertility of the soil. The resources of science should be used in the following, among other, ways:

- (a) Further to remove or combat hazards which impair productive efficiency, such as frost, drought, hail, grasshoppers, sawflies, diseases, weeds.
- (b) To widen our markets by finding new uses for agricultural surpluses, a step economically equivalent to diversification.
- (c) To complete soil surveys and land use classifications, thus providing a guide to settlement and to economic regional types of agriculture.
- (d) To make farm management surveys, thus placing ourselves in a position to capitalize the skill of the best farmers; also to determine costs of production, a

necessary step towards the establishment of parity prices; and to determine the most economic size of farm unit for different zones and types of farming.

(e) To keep pace with the development of mixed farming, by investigating problems in the use of fertilizers and leguminous crops (especially on wooded soils), in livestock and dairy husbandry, in horticulture, poultry, bees, and other minor enterprises; in farm buildings and machinery.

(f) To explore new marketing opportunities and methods.

The Faculty of Agriculture is already spending a substantial proportion of its appropriations on researches in the foregoing fields. The Committee recommends continued, and if possible increased, support of this work.

The Dominion Department of Agriculture has in recent years, under its P.F.R.A. schemes, borne the major share of the costs of the soil surveys carried out by the Department of Soils; it has also supported under the same programme the work on land use classification directed by the Department of Political Economy. The Committee recommends strengthening the Department of Political Economy to make possible the prosecution of studies in farm management and marketing problems.

Submissions received from the Research Council of Alberta (a body described in the section of this Report headed, "Activities of the University in Research") showed that its work was not having full effect on the development of Alberta's industries and resources, for lack of funds in recent years to

publish its reports. Its earlier publications include annual reports up to 1935, and four series of special reports on fuels, road materials, soil surveys, and geological surveys, respectively. Apparently the first step to make this body function more effectively is to provide for the publication of the useful knowledge it has already gathered.

Special problems of immediate interest, brought to the attention of the Committee by representatives of this Council, included:

(a) The binderless briquetting of coal, already advanced to a stage at which practical aid to the industry has been given.

(b) Determining which Alberta coals are best suited to the two main types of automatic domestic stokers, a form of heat installation rapidly increasing in popularity.

(c) Development of "producer gas" as a source of motive power, especially in wooded areas of the north where gasoline is expensive and moreover should be conserved.

(d) Suitability of waste sand from McMurray bitumen process, for use in glass manufacture, to replace that now imported from the United States by the glass factory at Redcliff.

(e) Separation of an objectionable sulphur impurity from McMurray bitumen, gasoline, etc., and its use as an odorant for Edmonton gas.

(f) Study of available supplies of heavy crude oil at McMurray, Vermilion, and Wainwright.

(g) Further studies of McMurray bituminous sands; all information being collected at present is the property of a private concern.

The foregoing are problems of war-time importance, mainly in the Fuels Division of the Council's work. The Geological Survey Division, between 1919 and 1940, examined 40,000 square miles of Alberta with respect to coal, oil, domestic water supplies, gravel for highway construction, soil utilization, and tourist attractions.

However, there are 248,800 square miles of land area in the Province. Surveys should certainly be made in advance of development. For example, the economy of road building could be increased by a knowledge of the distribution of gravel deposits. The industrial clay resources of the Province should also be surveyed. Water supply is the subject of a continual stream of inquiries directed to the Department of Geology, many of which cannot be answered for lack of geological data.

The Committee believes that the Research Council of Alberta can serve a most useful purpose as the research arm of the Provincial Government. An agency which ties in the research capacity of the University to provincial needs as seen by the Government should be used to the fullest extent compatible with financial practicability. At least some expansion of activity over the very restricted programme of the past ten

years would seem justifiable. New industrial enterprises will be an essential part of post-war adjustments, and the Council should be in a position to render all possible aid with respect to the technical problems involved. The problems brought to the attention of the Committee obviously have an important bearing on the development of the resources of the Province. Already a detailed report on the availability of Alberta coal has been made to Imperial Chemical Industries for use in planning post-war developments.

It would seem that in due course the organization of the Alberta Research Council should be extended to cover the whole range of technical problems in the development of the natural resources of the Province. A Biological Division, for example, could take care of problems in silviculture, fisheries, and fur-bearing animals. This broadening of scope would utilize more fully the research capacity of some University departments which have not hitherto been called upon to work for the Council.

It is sometimes forgotten that scientific knowledge has two distinct economic values: not only may it serve to promote useful enterprises, but it may also discourage unsound projects. One serious effort to float a scheme for the development of McMurray bituminous sands, which would have involved a loss of not less than a hundred thousand dollars, was blocked by the Council's efforts. The saving to investors in this one instance was more than the entire cost of the research work. The positive results of this research are still to be

realized, as the bituminous sand development is still in its infancy. The eventual size of the industry will be limited only by market demand, as the supply of raw material is enormous. Another example is furnished by developments in the oil industry. The information gained in two seasons' survey in the foothills indicated both the areas in which the geological structures were favourable to oil accumulation and other areas in which it was not advisable to spend time and money in the search for oil.

While it is easy to show that scientific research is profitable as a long-term investment, there still remains the difficulty of raising the funds needed immediately. The Committee believes that any particular industry should when possible bear part of the cost of the research needed to promote that industry. Not a few large companies are spending substantial sums on research for their own private benefit; this is true even in Alberta. The information so obtained is not available to the public. State supported research is the only way to secure the information necessary to ensure the development of our natural resources in the public interest. While the Canadian Wheat Pools were in full operation, they made a levy of half-a-cent per bushel on all wheat handled, to create a fund for research. A similar scheme was proposed in one submission to the Survey Committee, the recommendation being that a royalty of one cent be levied on every ton of coal mined and on every barrel of oil produced in Alberta, ten cents on every game license issued, etc. This is in line with the principle

set forth above, that each industry should bear part of the direct costs of research in its own interests, and the Committee suggests exploration of the practicability of these and similar proposals.

3. Diploma course in dairy manufactures

The Alberta Dairymen's Association submitted a brief to the effect that Alberta's dairy industry is not adequately supported by educational and research facilities. They pointed out that Alberta stood third among the provinces in dairy products, valued at about 28 million dollars in 1941.

Farm boys who go to the Provincial Schools of Agriculture, said the Dairymen's representatives, can get a satisfactory course in the production and care of market milk and cream, and in home dairying, but cannot cover adequately the field of dairy manufactures. The refresher courses of one month given by the University, annually for butter makers and occasionally for cheese makers, are useful, and should be extended to the ice cream and dried milk industries. The University also turns out a few specialists in dairying, through its degree course. What is urgently needed, however, is a diploma course of at least three months' duration, similar to the courses given at the Ontario Agricultural College and at the University of Manitoba.

Since students in such a course would not be regular matriculants, but enter largely upon the basis of practical experience, the question was asked as to whether such training was properly a University function. To this the delegates

replied that to organise the course elsewhere would involve duplication of equipment required in any case at the University for both teaching and research. Some of the present University equipment, they pointed out, is now quite out of date. They emphasized the need for trained men in dairy plants as being greater than at any time in the past, partly owing to the rapid growth of the industry and partly to enlistments. They also urged that the quality of New Zealand butter, the chief competitor of ours, can be duplicated only if adequate facilities for instruction and research are provided at the University.

Inquiry of the Professor of Dairying at the University showed him to be interested in diploma courses and quite willing to organize them, since the resulting flow of students from the factories through his Department would keep him in close touch with all the practical problems of the industry requiring investigation. He estimated, however, that it would add about £6,000 to his annual operating costs, not including the capital cost of providing extra space.

The Committee was favourably impressed with the claims of the dairy industry to consideration, and recommends that the provision of more adequate accommodation and other facilities in this field of work at the University be placed well up on the list of expansion priorities.

5. Department of Chemical Engineering

For fifteen years a curriculum in chemical engineering has been carried in the University, with no department in that

subject yet established. When at the outset it was arranged that a number of departments would co-operate in organizing this course of study, it was expected that a special department would shortly be created to head it up. Financial conditions have prevented the fulfilment of that project, and the makeshift arrangement has been continued. It cannot be regarded as satisfactory.

While the Committee has gone on record earlier in this Report as opposed to the establishment of new departments until the needs of existing ones are more adequately met, the case of chemical engineering is unique in that it has actually been carried along on a temporary basis for a substantial period, and has proved a popular course, as such an important subject deserves to be. With the rising importance of the oil industry in this Province, it would seem that the University should properly contemplate the establishment of an adequate Department of Chemical Engineering, with petroleum engineering as the central feature of its work.

Part II

A. The University Act

1. The Committee have had before them the acts incorporating several of the Canadian universities such as:

McGill University,
The University of Toronto,
The University of Manitoba,
The University of Saskatchewan, and
The University of British Columbia.

A study was also made of that part of the recent survey of the University of Chicago, relative to the organization and administration of that University, by

Floyd W. Reeves,
Frederick J. Kelly,
John Dale Russell, and
George A. Works.

The Committee has had the advantage of the various submissions that have been made to it relative to the present University Act.

2. It is an accepted principle that an independent University, free from outside control, is one that is most satisfactory and best serves the state. This principle, however, involves a corresponding one that the governing bodies of the institution should at all times keep in mind the high purpose of the university and in their deliberations and decisions promote only the best interests of the university.

3. The University of Alberta is state-owned and is in part supported and maintained from Provincial funds. It follows that, in order to justify and maintain its independence,

the University must keep abreast of modern trends of thought and of activities in like institutions elsewhere, and at the same time use its facilities to best serve the people of the Province. The governing bodies of the institution and the teaching staff should appreciate that the people of the Province are vitally interested in the work of the University - they supply a substantial part of the funds and have the right to scrutinize and criticize the actions of the governing bodies and the efficiency of the teaching staff.

4. Broadly speaking, the governing bodies of the University are:

- (a) The Board of Governors,
- (b) The Senate,
- (c) The General Faculty Council,
- (d) The Faculty Councils,
- (e) The Deans' Council.

5. The last mentioned Council is at present one without statutory authority, and its duties have not as yet been clearly defined. We propose, however, to give this Council such authority and to assign to it particular duties.

6. The Committee has carefully considered the powers and duties assigned to the governing bodies of the institution and in the light of experience has concluded that the changes to be recommended would be in the best interests of the University.

7. It is the view of the Committee that, as near as may be, there should be one supreme authority in all matters

pertaining to the University, whether administrative or academic. The Committee is of the view that the interests of the University would best be served by constituting the Board of Governors, in general, the controlling body of the institution.

8. To attain the best results the Committee considered it essential that the following principles should govern its recommendations:

- (a) That the powers and duties assigned to each governing body should be those for which it is best suited;
- (b) That the members of each governing body should be those most familiar with the duties and powers assigned to that body;
- (c) That the Alumni should be represented on both the Board of Governors and on the Senate;
- (d) That a large governing body may be unwieldy and cannot therefore produce the best results.

9. Elsewhere in this report the Committee has expressed the view that active and loyal alumni are essential to the well-being of this or any other university and for that reason every opportunity should be given to the alumni to aid and guide University activities.

10. The Committee is of the opinion that recommendations for degrees in course should be made by the General Faculty Council and, subject to the general supervision of the Board of Governors, that all matters of a purely academic nature

should be assigned either to Faculty Councils or to the Deans' Council, the latter to be given statutory authority. The result would be that these matters would be dealt with by a body familiar with the matter with which it had to deal.

We are satisfied that this is in harmony with present methods and present thought, that is to say, that educational matters should be handled by experts in their respective fields.

11. To better appreciate the recommendations of this part of the Report, a brief summary is given of the constitution and powers of the present governing bodies. For further details reference must be made to the University Act (U.S.A. 1952, Ch. 56) and the various amendments.

BOARD OF GOVERNORS

12. The Board of Governors at present consists of thirteen members, viz.:

The Chancellor,
The President of the University
The President of the University Alumni
Association.

together with the Chairman of the Board and nine other persons appointed by the Lieutenant Governor in Council.

13. At present, except as otherwise provided in the Act, the government, conduct, management, and control of the University and of its properties, revenues and business affairs are vested in the Board, together with all other powers of the University not vested in or specifically assigned to any other body.

THE SENATE

14. Broadly speaking, at present the Senate of the University has control over academic matters, the granting of degrees, and has certain disciplinary powers. The Senate consists of fifty-four members composed as follows:

The Chancellor of the University,
The Chairman of the Board,
The President of the University,
The President or other head of every affiliated College other than preparatory schools, five in number,
The Deans of the Faculties of the University, five in number,
The Provost of the University,
The Principal of the Normal School,
The Deputy Minister of Education,
The Deputy Minister of Agriculture,
The Deputy Minister of Health,
Twelve members from the several Faculty Councils,
One member of every Society or Association incorporated by the Provincial Legislature whose examinations for status are conducted by the University, twelve in number.
Ten members to be elected by Convocation.
The Chairman of the Freshman Committee,
The Director of the Department of Extension.

15. The Committee believes that the Senate should play a more important part in the activities of the University than it can do as at present constituted. The Committee considers that an important function of the Senate is to be a bridge or link between the life and activities of the Province and those of the University. For that reason its members should include representatives of various elements of society within the Province, in addition to members representing the Board of Governors, affiliated colleges, the Department of Education, the teaching staff, and the alumni.

16. Agriculture, labour, and business represent the greater part of the population of this Province and are therefore interested in the activities of the University and are not now directly represented on the Senate. We consider that societies representing these interests and other social organizations whose aim is to promote the social, cultural, and economic welfare of the Province should be represented on this body.

17. Heretofore the most important function of the Senate has been the granting of degrees in course and the consideration of purely academic matters. With regard to these the Senate has acted upon the recommendation of the several Faculty Councils. With respect to the granting of degrees in course, in our opinion the proper body to recommend such degrees to Convocation is the General Faculty Council. Other matters, purely academic, should be assigned to such Faculty Councils as are most competent to deal with them.

18. The professions at present are represented on the Senate. Your Committee recognizes the contributions that may be made to the University by professional societies. We, however, are of the opinion and recommend that the professions would be best served and the interests of the University would be advanced, if representatives of the Professional societies were made members of their appropriate Faculty Councils.

19. Your Committee is strongly of the view that a body of

fifty-four is unwieldy and cannot attain the best results. We believe that the members of the Senate should not exceed twenty-five in number.

20. Your Committee is convinced that a Senate constituted as indicated with duties as will be recommended should be a vital force in the life of the University and of the Province.

21. Your Committee feels that not only should the alumni be represented on both the Board and the Senate but that it would be advisable that a representative of the student body should be on the Senate, and a recommendation will subsequently be made implementing this suggestion.

22. Your Committee is inclined to the view that the length of term of either an appointed or an elected member of either the Board or the Senate should be limited.

RECOMMENDATIONS

23. It is not the intention, nor is it considered advisable, to set out in this Report in detail as to how the Act should be drafted to carry out the views here expressed. Our purpose only is to set out, in general, our recommendations.

BOARD OF GOVERNORS

24. Your Committee recommends that the Act should provide:

- (a) That the Board of Governors should be the controlling body in all University affairs.
- (b) That it consist of:

The Chancellor of the University,
The President of the University,
The President and Vice-President of
the Alumni Association, and one
other representative of the Alumni,
- The Deputy Provincial Treasurer,
- The Deputy Minister of Education,

and a Chairman and seven other persons
appointed by the Lieutenant Governor in
Council.

- (c) That no appointed member of the Board should hold office for more than six years.
- (d) That of the first members appointed two should hold office for two years, three for four years and three for six years, and thereafter the appointed members should hold office for six years.

24a. In addition to all other powers of the Board of Governors, we recommend that the Board shall have the power to establish colleges as part of the University, and authority for establishing research laboratories, institutes, experimental stations, radio stations, and generally such activities as the Board may consider necessary and advantageous to the University.

THE SENATE

25. Your Committee recommends that the Senate be composed of twenty-five members consisting of:

The Chancellor of the University,
The President of the University,
The Chairman of the Board of Governors,
The Supervisor of Schools,
The Principal of St. Stephen's College,
The Rector of St. Joseph's College,
The Principal of Mount Royal Junior College,
The Rector of St. Aidan's College,
The Principal of the Provincial Institute of
Technology and Art,

The Director of the Department of Extension,
The President of the Alumni Association,
The Vice-President of the Alumni Association,
One elected representative of the Alumni
Association,
Three representatives of the General Faculty
Council,
One representative of the Deans' Council,
→ The President of the Students' Union.

(The above eighteen persons to be
styled as "statutory members")

and seven additional members (styled as
"appointed members").

The seven appointed members to be selected to represent agriculture, business, labour, industry, the professions, and Provincial organizations devoted to social and cultural welfare and chosen in the manner following: In the first instance by the eighteen statutory members and thereafter by the members of the Senate in its entirety from time to time, but so that the total number of statutory and appointed members shall not at any time be greater than twenty-five.

The Registrar of the University shall be the Secretary of the Senate.

26. That no appointed member of the Senate should hold office for a longer period than four years.

27. That the powers and duties of the Senate should, in general, be as of a continuing body to enquire into all matters that might tend to enhance the usefulness of the University and to report and make recommendations in respect to the same to the Board of Governors and to the appropriate Faculty Councils of the institution. These powers and duties would be

similar to those assigned to this Committee. Specifically the Senate shall have the following powers and perform the following duties, that is to say:

- (a) To provide for the regulation and conduct of its proceedings, including the determination of the quorum necessary for the transaction of business;
- (b) To provide for the granting of and to recommend to Convocation the granting of honorary degrees;
- (c) To recommend to the Board of Governors the establishment of exhibits, scholarships and prizes;
- (d) Upon the recommendation or with the concurrence of the General Faculty Council to recommend to the Chancellor the cancelling of degrees;
- (e) To recommend to the Board the establishment of Faculties, Departments, Chairs, and courses of instruction in the University in any subject as to the Senate may seem meet;
- (f) To make provision for enabling the students of the University, and of the affiliated institutions and colleges, to appoint a representative committee of themselves, to be chosen in such manner as shall be approved by the Senate, and which shall be the recognized official medium of communication on behalf of such students between them and the Senate, and which shall have the right to make communications through the President of the University to the Senate upon any subject in which they are or may deem themselves to be interested; and to give to such committee such powers of government with respect to the conduct of the students it represents as to the Senate shall seem meet, but always subject to the control of the Board, Senate, President, and Deans of faculties as in this Act set out;

Provided that nothing herein contained shall take away or impair the right of

any student of or in the University to make complaint to the governing bodies thereof in respect to any matter as to which he is or may deem himself to be entitled to complain, but every such complaint shall be transmitted through the President to the proper governing body and in no other manner whatsoever;

And provided further that nothing in this section contained shall be construed or is intended to or shall impair or affect the right of control which any affiliated institution or college possesses over its students;

- (g) To require written or oral reports from the various Faculty Councils or faculty members of the University, as it may deem advisable, and to require the attendance, if it so desires, of faculty members, and as a result of such reports and attendances to make such recommendations to the Board of Governors as to it may seem meet.
- (h) To hear submissions from any person or body interested in the University and on its own motion to enquire into any matters pertaining to the University and to make any recommendations it deems advisable to the Board, or other appropriate body.

OFFICE OF CHANCELLOR

28. It is recommended that the Chancellor of the University be elected as provided in the present Act, with the powers and duties in such Act assigned, but should not hold office for a period longer than four consecutive years.

OFFICE OF PRESIDENT

29. The report of the survey of the University of Chicago referred to above has this to say regarding the office of President:

"The heart of educational organisations is the President's office"

and also:

"In the eyes of the public the President is the personification of the University; he represents it before the people; he defends its policy; he provides the vision to inspire its major developments and the statesmanship to lead it through the changes which these developments involve."

30. The Committee agrees with the expression relative to the President and the President's office, and in order that he should have the time to properly discharge his duties your Committee believes that there should be a person appointed, such as a Business Manager, or Comptroller, who would directly represent the President in the business affairs of the institution. The duties of this officer are referred to elsewhere in this Report. They should be defined in the Act and, if thought advisable, the office might be dignified by the title of Vice-President. This official to be appointed by the Board of Governors and entitled to attend all meetings of the Board without voting power.

GENERAL FACULTY COUNCIL

31. Your Committee recommends:

- (a) That the General Faculty Council shall have all the powers now assigned to it;
- (b) That it should have the power to recommend to Convocation degrees in course;
- (c) To provide for the preparation and publication of the University calendars and for the calendars of such affiliated institutions or colleges as desire their calendars to be inserted in the University calendar;

- (d) That it should have all other present powers and duties of the Senate not recommended to be continued to the Senate in the proposed Act.

DEANS' COUNCIL

32. We recommend that the Deans' Council be given statutory authority with the following functions:

- (a) To advise the President in academic matters;
- (b) To act as an executive body for the General Faculty Council;
- (c) To authorise lecturing and teaching by other than duly appointed members of the staff;
- (d) To have such other powers and duties as may be assigned to it by the Board.

33. The proposed Act should contain a provision that the University has exclusive degree conferring powers within the Province.

34. The Committee recommends that any proposed Act should include a prohibition of the use of the name of the University, or of the word "University" or any derivatives, such as "Varsity", in names of firms, businesses, advertising, etc., without the consent of the Board of Governors.

35. Section 80 of the present Act reads:

- "80. (1) In addition to such sums as may be appropriated by the Legislature for the purposes of the University, there shall be paid annually to the Board a sum equal to fifty per centum of the net receipts of the Province for

the current year under The Succession Duty Act.

- (2) Such percentage shall be paid to the Board at such time, either during the current year or early in the following year, as the Provincial Treasurer shall decide."

Inasmuch as the provisions of this Section have not for many years been implemented your Committee recommends that the same be struck out.

36. Your Committee feels that it is a duty of the University to give leadership within the Province, particularly with regard to social and economic problems. We are of the view that persons with trained minds, such as members of the University staff, ought to be encouraged rather than restrained from exercising their full rights of citizenship. We are of the opinion that there should be complete freedom of the staff in political matters, unless it appeared, in particular instances, that the activities of any member of the staff were prejudicial to the University. Your Committee therefore suggests that the Board of Governors ought not in the future to pass general regulations restricting the political activities of members of the staff but that each individual case should be dealt with on its merits and as the occasion arises.

The whole Committee agrees with the above, but a minority considers that the suggestion should be given statutory effect. A minority report is therefore appended hereto.

Minority Report on Political Freedom
for Members of the University Staff

Several of the briefs submitted to the Survey Committee recommended that the Committee secure to members of the University staff the full rights of public service and democratic citizenship. Some of the recommendations on this matter may have been prompted by the fact that eight years ago the Board of Governors made a regulation restraining full-time members of the University staff from taking part in provincial politics, or from offering themselves as candidates in a federal constituency. Referring to this regulation, the Edmonton Bulletin made the following editorial comment at that time: "No barrier to public life and service should be erected against any citizen because of his or her employment, providing his work does not suffer from his political activity. Canada surely needs the best available minds of all political faiths in public debate and public service, because only in this way is truth, justice and light provided for the people."

The undersigned members of the Survey Committee are of the opinion that political freedom for members of the University staff is as urgent a need today as it was eight years ago, and that it will become still more urgent in the ten years that lie ahead; and for the following reasons:

First, the submissions to the Survey Committee have been almost unanimous in recommending that the University should give more leadership in the affairs and activities of the Province. Second, the most important questions engaging the

attention of our citizens today, not excepting those relating to an all-out war effort, are in the main social and economic, and therefore political. As a consequence, no member of the University staff in his relations with the public can possibly avoid these questions, even as a citizen; and as a well-trained and competent thinker, he should not be expected to avoid them. In the third place, since leadership from the University involves leadership in public thinking on political questions, the very least that can be done to encourage this leadership is to guarantee to members of the University staff a full right to engage in public discussion and public service, with adequate protection for that right.

R. Freeman Butts, in his book entitled "The College Charts Its Course," points out that "modern science and modern industrialism have created a society whose very essence is rapid change; and unless higher education takes account of the direction of change, it is easily possible that social and economic forces will outrun the forces of social welfare." The university, continues Butts, is not an "ivory tower" but a "watch tower." "Society cannot afford to let its best people hide in isolation from the pressures of society, but must see that the university faculty and students alike are constantly engaged in studies and activities that will be useful in solving persistent social and personal problems."

There was a time when "politics" was a second career for retired business or professional men or farmers, with which persons employed in workshop, school or college, neither could

nor should have any proper concern. Today our society is so complex, the tempo of industrial evolution is so rapid, and the problems of our new culture are so urgent, and so vital to the very subsistence of democracy, that whether we will or no, we are all, as J. B. Priestly has well said, living politics, making political statements and adopting political attitudes every day of our lives. Political life can no longer be regarded as a career, but as a civic duty. In the pursuit of this duty, intelligence, training for public service and competence in the field of social science are obviously the resources that are now most valuable and necessary; and since these resources should be found in the University, the citizens of Alberta have a right to expect that their Provincial University will supply its due share of public leaders; just as in many provinces of Canada, members of the teaching profession are entering the Provincial legislatures and the House of Commons, in a considerable number. The undersigned members of the Survey Committee do not wish to suggest in any way that members of the University staff should be free to engage in public service to the detriment of their work in the University. In regard to this matter, the President and Board of Governors must of necessity have full power to act. Nevertheless, and without restricting in any way the power of the Board of Governors to maintain in the University a high standard of efficiency and professional conduct, the undersigned members of the Committee recommend that the University Act be amended in such a way as to guarantee to all staff members, officers and servants

of the University. the right to belong to any lawful organization, to discuss public questions publicly, to participate in public affairs, or to seek public office, by restraining the Board of Governors from making any general regulations that would impair that right.

John W. Barnett

H. C. Nowland

Minority Report on Constitution of Board of
Governors, and Method of Appointing President

In certain particulars I disagree with the majority of the Committee as to the recommendation made for the appointment of the Board of Governors and the President of the University.

In my opinion the Board of Governors should be composed of thirteen members comprising the Chancellor of the University, the President of the University, the President, Vice-President and one other representative of the Alumni Association, the Deputy Provincial Treasurer, the Deputy Minister of Education, and the Chairman and five other members appointed by the Lieutenant Governor in Council, for a period of eight years. Of the first members appointed by the Lieutenant Governor in Council, three should hold office for four years, and thereafter three members should be appointed at four-year intervals.

Secondly, it is my view that the constitution should be so devised that the President of the University could not be appointed without the concurrence of the other twelve members of the Board of Governors, and should hold office at the pleasure of the Board.

In making these two recommendations, I am conscious that the Committee was unanimous in its recognition of certain basic principles upon which the administration of the University should rest, which are that the University best serves the state when it is independent and free from outside control, and that the Board of Governors should be the one supreme authority in

all matters pertaining to the University whether administrative or academic; but that on the other hand the institution should keep abreast of modern trends and activities. I therefore disagree with my colleagues only in the procedure which should be followed to incorporate these principles in the constitution of the University.

It is my view that the government of the day could safeguard its interests through its deputy ministers of education and the treasury, and through the six members appointed at four-year intervals. On the other hand, the majority decision of the Board would rest with four continuing officials and three alumni, and the appointed members could only be completely changed at eight-year intervals. An element of continuity and stability would then exist which might not otherwise obtain, and a measure of independence made clear which might not otherwise be evident. This principle has been recognized in England, in the United States, and in Canada, by setting up private corporations with administrations not readily removable, in certain instances where projects have been financed by governmental funds, but where continuity of policy and stability of administration are in the public interest.

It is in my view consistent with the functions of the Board of Governors, as the supreme plenary power, that it should possess the function of appointing, or at least nominating, the president of the institution.

It is, I think, proper to say that there was no evidence presented to the Committee to the effect that governmental

pressure has in the past been exerted on the administration of the University, or that the appointment of the President or Board members has been motivated by any other consideration than the welfare of the institution.

On all other matters I concur with the report of the majority of the Committee.

F. C. Winapear

B. Internal Organization and Machinery of Administration

In Figure 1 the organization of the University is shown diagrammatically. The dual system of administration is here apparent. The Board of Governors, appointed by the Lieutenant Governor in Council to manage the business affairs of the University, receives from the Government annually the funds necessary for that purpose, and renders to the Government annually an account of its stewardship. The Senate, an elective body representing the various academic and professional interests of the Province, has jurisdiction over academic matters, subject to the restriction that it may not establish new faculties, departments, professorships, or courses of instruction, without the approval of the Board. In other words, the Senate must secure the consent of the Board before committing the University to new expenditures. The academic report of the Senate, though not required by the Act, is always attached to the financial report of the Board presented to the Government. The Chancellor, the Chairman of the Board, and the President, are members of both the Board and the Senate, thus ensuring liaison between these two bodies.

The University Act provides that if any question arises as to the powers and duties of the Senate or any other body or officer of the University, the decision of the Board shall be final, except that if the Board refuse to approve a recommendation of the Senate for the establishment of a new faculty, department, professorship, or course of instruction,

the Senate may appeal to the Lieutenant Governor in Council.

The full Board of thirteen members (Chancellor, President of the University, and President of Alumni Association, ex officio; Chairman and nine other members appointed by the Lieutenant Governor in Council) meets only three or four times a year, but the Executive Committee, consisting of the Chairman, the President, and one other member elected annually, meets about once a month to transact current business. Usually one or two other members of the Board are present by invitation at executive meetings, and minutes of these meetings are sent to all members of the Board. There have been no special criticisms of this part of the administrative machinery.

The Senate has fifty-four members, including the Chancellor, Chairman of the Board, President, three members representing Provincial Government Departments, ten members elected by the University alumni, twelve representing twelve professional societies, twelve elected by the five University faculties, five deans of these faculties, three other officers of the University, and six representatives of six other educational institutions in the Province. The Senate has two regular meetings a year. At the winter meeting the chief business is usually the consideration of changes in courses or curricula to be printed in the University calendar for the next year. At the spring meeting the members are occupied mainly in dealing with examination results of the session and in authorizing promotions, degrees and diplomas.

The Senate has been criticized as being too large and

unwieldy to deal with detail, and as being insufficiently informed to do much more than "rubber-stamp" the proposals brought forward by faculty representatives. As one way of overcoming the handicap imposed by its size and infrequent meetings, the Senate has delegated to several committees the detailed administration of many of its functions. These committees are shown in the lower part of the diagram (Figure 1) towards the right-hand side. Certain proposals for making the Senate more effective are put forward in the section of this Report relating to the University Act.

The President is appointed directly by the Lieutenant Governor in Council. As chief executive officer of the University, a member of both Board and Senate, and of all faculty councils, he carries great responsibility for harmonizing and unifying the whole organization. Of necessity, he must lean heavily on various officials, particularly the deans of the faculties, the Registrar, Bursar, and Provost, in carrying out the multifarious details of administration. He may, and does, appoint committees to help him with particular aspects of his work. Nine such committees are shown in the diagram. No aspect of his work is more important or exacting than that of dealing fairly and equitably with all members of the faculty, and of bringing the best available judgment to bear on the selection of staff. The Committee on Staff Appointments, shown third on the list, is a new one, without fixed membership, since the qualifications required in different staff members are so diverse as to be appraised best by a special advisory committee

in each case. With all the aids the President can summon, it is still clear that as the University develops he will require further relief from the routine detail of administration. He should be free to devote the major portion of his time and energy to the study of academic policy, to the selection and guidance of staff, to the task of interpreting the University to the public, and to the unofficial but important duties devolving upon one who should be an intellectual leader in his community.

The Registrar is primarily responsible for compiling and maintaining academic records and statistics. He is secretary to the Senate, editor of the University calendar, secretary to the examining boards of the eleven professional societies which co-operate with the University, and member of various other academic boards and committees. Upon the Registrar depends in large measure the smooth working of the University's relations with the Provincial Department of Education, the professional societies, the affiliated colleges, and other universities and academic bodies. The task of maintaining adequate records of the approximately 6,000 Alumni of the University has gone beyond the present facilities of the Registrar's office. The problem of associating the Alumni more closely with the life of the University has been discussed earlier in this Report.

The Bursar is responsible for the detail of business administration. Seven categories of business activities are shown in Figure 1 as coming under his jurisdiction. One of

these, the Works Department, includes the care of buildings and grounds. Appropriately, the Bursar is secretary to the Board of Governors and to various committees having to do with supervision of property or disbursement of funds. Already the capacity of the Bursar's office to discharge its numerous duties is seriously taxed, and as the University grows it will be necessary to enlarge its size and importance. A large university needs what amounts to a business manager, to relieve the President of all unnecessary detail.

The Provost is the officer in charge of student discipline. He is chairman or secretary of four committees on which staff and student representatives meet on common ground, namely: the Committee on Student Affairs, the House Committee, the Committee on Student Athletics, and the Committee on Medical Services; also of the following three additional committees having to do with student affairs: the Committees on Physical Education, Scholastic Standing of Students, and Fraternities. These indicate the variety of his contacts with, and responsibilities towards, the student body. Obviously he should be a man of great natural friendliness and understanding. The inexperience and exuberance of youth often lead students to plan social and other activities which the Provost must curb, or commit acts which he must discipline. To fulfill these constabulary duties and at the same time build up such a tradition of fairness and good will that the students heed him gladly, is the ideal the Provost must set himself. He needs a large stock of patience, sympathy, and tact to combine

with frankness, firmness, and good judgment.

In view of the importance of fostering a loyal and happy spirit among the students, both for its own sake and as a basis for alumni support of the University, the Committee proposes to explore further the whole question of student guidance in the University, and of the relations between students and staff.

One source of complaint among the students is the lack of information made available to them on matters which concern them financially, such as the operation of the bookstore and the dining room. It is recommended that the Administration find an appropriate method of conveying to the student body all necessary information to allay suspicion or unrest. Mutual confidence between administration, instructional staff, and students should be fostered by every legitimate means.

The faculties have been from the outset the main administrative divisions on the academic side. Each has a council which the Act specifies shall consist of the President, Dean, professors, associate professors, and such other members of the teaching staff of the faculty as the Board shall determine. So far the membership has been extended to include only assistant professors, and there is some question whether it would not be desirable also to include lecturers and full-time instructors. Certainly some provision should be made to utilize the ideas and energies of these younger men in the framing of policies and programmes. Departmental organization does provide this in many cases. The faculty councils are

authorized, subject to the approval of the Senate, to determine courses of study, appoint examiners and pass upon the results of examinations, deal with appeals from students, and decide other matters affecting their respective faculties.

The General Faculty Council was brought into existence informally, early in the history of the University, as a forum for the discussion of matters of common interest to the faculties, and for developing general policy. However, it had no statutory recognition until 1929, when an amendment to the Act established it with a membership composed of the President, deans, full professors, Registrar, Librarian, Director of Extension, and heads of departments of instruction not included in the foregoing. It was given jurisdiction over time-tables for both instructional classes and examinations, a power previously vested in the faculty councils. This merely recognized a de facto situation, as it was obviously impracticable for individual faculties to set time-tables when certain classes were shared by several faculties. The General Faculty Council was also authorized to take over any other powers formerly delegated to the faculty councils. With minor exceptions it has not done so, chiefly because of the impracticability of so large a body, meeting only once a month, dealing effectively with any large volume of detail. The faculty councils have therefore continued to report directly to the Senate in regard to courses of instruction and examination results. If, however, the Senate should be reduced in size and given other duties, as suggested earlier in this Report, it will become desirable for

these reports to be presented to the General Faculty Council. It will also become desirable to lighten the burden of detail devolving upon the General Faculty Council by giving more executive responsibility to the Deans' Council, previously an informal consultative body.

The General Faculty Council is further authorized to exercise such other powers and duties as may be assigned to it by the Board, or delegated by the Senate. So far no formal assignments or delegations have been made. The Senate has continued the policy, well established before the General Faculty Council was given legal standing, of delegating to committees any special duties it cannot conveniently discharge itself.

Finally, it is to be noted that the powers and duties of the General Faculty Council are specified in the Act as subject to the control of the Board. In the Section referring to the establishment of faculty councils, enacted 1910, these are stated to be subject only to the Senate. However, another clause of the same date, to which reference has already been made, provides that in case of difference of opinion as to powers and duties, the decision of the Board shall be final. This over-riding authority of the Board is given more explicit recognition in the amendment of 1929 establishing the General Faculty Council.

The School of Graduate Studies was set up by the Senate to have general oversight of the work of post-graduate students. It does not have jurisdiction over graduates who are

studying for a second bachelor's degree in a combined course, such as B.A., B.Sc.; B.A., M.D.; etc., but only over those who are studying for the Master's degree. It has no staff or instructional department of its own, but functions rather like a committee, with the Dean of the Faculty of Arts and Science as chairman.

The other five schools shown in the diagram (Figure 1) are very much like small faculties. They are, however, under the general jurisdiction of the two faculties indicated, and report through these faculties rather than directly to the Senate. Each school has so far only one department of instruction, whereas every faculty except Law is subdivided into several departments.

The status of the College of Education requires clarification, as there is no statutory authority for the University to establish colleges of its own, though it may affiliate other colleges. The College of Education has been treated essentially as a faculty, and the according of full faculty status seems to be the next logical step in its development. So far it consists of only one department, but it could be built up into a faculty by associating with it other departments as outlined earlier in this Report.

The departments are the ultimate administrative units of the University. They enjoy a considerable measure of autonomy. In most small universities the department heads consult directly with the President in regard to many aspects of their work and policies. The deans may in such cases be

little more than chairmen of faculty councils. As a university grows larger, it becomes more difficult to maintain this intimate relation, and the deans must assume a greater share of administrative responsibility. The University of Alberta is rapidly entering this later stage. While it is to be hoped that all members of the staff may continue to have reasonably free access to the President, it is inevitable that most of the detailed arrangements must be negotiated through the deans' offices.

C. University Finance

1. Sources of Revenue

A study of the "use now being made of the monies available" should contain an analysis of the various sources of revenue with a view to ascertaining that such sources are properly balanced as between themselves, and a consideration of expenditures with a view to ascertaining that skill and economy are being exercised and proper weight given to the respective needs of the various departments of the University's activities. This was considered from two aspects: firstly, what has been done in the past in the light of what is being done today; secondly, what is being done at this institution in the light of the procedure being followed at other publicly owned universities in Canada and the United States.

The earlier years in the financial history of the University were of course characterized by a rapid expansion in capital expenditures obtained from borrowing by debenture on the credit of the University through powers contained in the University Act. In 1924 and 1925, however, the debenture issues (guaranteed by the Province) were consolidated into the general debt of the Province of Alberta. In 1917 the Department of the Provincial Treasurer proceeded to exercise close supervision over the financial activities of the University, and a pre-audit by the Provincial Auditor was instituted and is still in effect. According to information submitted to this Committee the control and the pre-audit operate satisfactorily,

and tend to afford the government of the Province a measure of protection in respect to the substantial investment of public funds contained in the University. Capital investment in land, buildings and equipment stated at \$4,685,593 at March 31, 1941, is largely represented by debentures in the amount of \$4,000,000 outstanding.

The two main sources of revenue have always been, and must continue to be for some time, firstly the government grant, and secondly student fees. In 1920 the ratio of these sources was as 7.3:1; that is to say, \$7.30 was contributed by public revenues of the province for each \$1.00 contributed by the students. In 1922 a high point in governmental support was attained when \$474,890.66 was contributed from public revenues for the ordinary operating expenditures of the University, in relation to \$51,423.75 from student fees, a ratio of 9.2:1. In that year the average fees per student were \$40.01. For the year ended March 31, 1941, this ratio had dropped to 1.7:1; that is to say, only \$1.70 is now provided from public revenues for each \$1.00 contributed by the students. Average student fees are \$112.81, a new high point in the history of the University.

A chart showing the annual Government Grant and the annual student registration throughout the life of the University appears as Figure 2 in Appendix B.

2. Student fees

Support of higher education is of course a matter of public policy, and if the University performs its functions with

a maximum of economy and financial skill, it necessarily follows that declining governmental revenues must either be offset by private contributions or by an increase in student fees. The latter alternative has characterized the trend. It should, the Committee believes, be pointed out that an increase in fees has a tendency to reduce the percentage of people who can afford to take advantage of higher education, and ultimately to deprive the country of a better educated citizenry. Further, the exigencies of university finance are such that any drastic curtailment in the source of any one particular class of revenue may easily result in severe difficulties, and probably even in the irretrievable loss of certain functions which have accumulated over a period of years. In 1934 the government grant was reduced to \$390,000 from \$540,000 in the previous year, the ratio of government grant to student fees declined from 3.4:1 in 1933 to 1.9:1 in 1934. The average student fees in that year increased from \$78.82 to \$109.55. The adjustment difficulties in that year were enormous, and whereas losses of accumulated facilities were undoubtedly sustained, it is surprising that greater disruption did not occur. In so far as it is possible, the financial growth should be steady, with a view to long term considerations, and without the acceptance of additional financial responsibilities unless capacity to finance has been fully explored.

At the present date, however, it would not appear that the fees charged are excessive in comparison with those charged at other Canadian institutions. A comparison in this

matter, owing to varying methods of basing the fees, is hard to make, but the data which the Committee has been able to obtain would indicate that the fees at this University are on the whole somewhat higher than those obtaining at the University of Saskatchewan, are approximately the same as those obtaining at the University of Manitoba, and are somewhat lower than those charged at eastern universities and the University of British Columbia.

According to figures supplied by the Dominion Bureau of Statistics with respect to the percentage of revenues obtained from student fees and other sources for all Canadian universities in 1939, 33% of the total revenues was obtained from student fees, 55% was obtained from government grants and endowments, and 12% from other sources. In Alberta for the year 1940-41, 36.6% was obtained from student fees, 57.7% from government grant and 5.7% from other sources. It would therefore appear that a somewhat larger proportion of the costs of the University are being borne by students than has obtained generally throughout Canada. The statistics with respect to all Canadian universities would include, however, a number of privately endowed and religious institutions, and the Committee therefore obtained by reference to a biennial survey of education in the United States by the Federal Security Agency of the United States Office of Education for the year 1935-36 the records of 566 publicly owned American institutions, 10 of the smaller and 5 of the larger American publicly owned institutions; in addition the Committee obtained data by reference to the financial state-

ments of 4 publicly owned Canadian institutions, all of which are summarized in the following analysis of sources of revenue expressed in terms of a percentage of the total revenue obtained:

	566 Publicly Owned American Insti- tutions	10 Publicly Owned Smaller American Insti- tutions	5 Publicly Owned Large American Insti- tutions	4 Publicly Owned Canadian Insti- tutions	Univer- sity of Alberta
Student fees	16.2%	18.2%	21.0%	38.8%	36.6%
Endowment	2.4	3.0	3.4	2.4	-
Government Grant	68.8	70.9	64.6	54.8	57.6
Private Grant	1.5	1.7	2.7	1.0	1.7
Other Sources	<u>11.1</u>	<u>6.2</u>	<u>8.3</u>	<u>3.0</u>	<u>4.1</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%

It will be observed that a higher proportion of revenues is being derived from student fees at this University than is generally true in the United States.

The conclusion that the fees charged students are on the whole somewhat lower than those obtaining elsewhere, whilst at the same time the percentage of revenues represented by these fees is higher, may only be reconciled by the deduction that costs per student are on the whole somewhat lower than those obtaining at comparable American universities.

3. Scholarships and gifts

An increasingly important aspect of the financial

encouragement which may be given either directly or indirectly to potential leaders is firstly in scholarships and prizes, and secondly in private endowments and other gifts. Since the year 1930-1931 scholarships and prizes given have exceeded \$64,000, from funds obtained in the income from escheated estates, from the Tegler Trust and from other sources. In addition thereto the University has received grants and endowments for specialized purposes from the Rockefeller Foundation, the Carnegie Corporation, the Research Council of Canada, and other bodies, which since the inception of the University have amounted to about \$1,000,000. Every encouragement should be given to public spirited individuals and institutions to make a contribution to the nation and the Province in this way, and it should probably be pointed out that under the Dominion and Provincial Income Tax Acts, gifts for charitable and educational purposes are exempted only up to 10% of the income; and that whereas under the Provincial Succession Duties Act, bequests for educational purposes are specifically exempt under Section 7 (d), bequests or devises to other beneficiaries are taxable at the rate applicable for the entire estate, including bequests to the University. The Dominion Succession Duties Act makes no exemption for bequests or devises for educational purposes. As a first step it would seem desirable that legislative encouragement should be given to individuals and institutional benefactors to make private endowments and gifts.

4. Distribution of expenditures

In considering the ratio between revenues contributed

by students and those obtained from other sources, it is also interesting to observe the ratio obtaining between expenditures applicable to instructional costs, and those applicable to research, extension and so on. At a survey made at the University of Chicago in 1929 (published in 1933) by Floyd W. Reeves, Nelson B. Henry and John Dale Russell, it was ascertained that 54.8% of the total costs incurred by that university might be classified as for instructional purposes. A somewhat similar study made with respect to the activities of the Faculty of Agriculture at this institution would indicate that about 41% of the costs incurred by that faculty may be classified as applicable to instructional activities. Whereas it is undoubtedly true that the Faculty of Agriculture spends a smaller proportion of its effort on instruction than is the case in other faculties and schools, it is nevertheless true that the student bears a higher proportion of the costs of his own higher education than is generally recognized.

The most significant expenditure contained in the annual published accounts of the University must of necessity be salaries paid to the instructional, administrative and maintenance staff, and it is probably to be expected that as the institution grows older and an increasing number of its professorial staff achieve the maximum remuneration which they can expect to obtain, up to a certain point the ratio of expenditures for salaries would tend to increase. This normal expectation has not been realized, owing to suspension of the salary schedule, with the annual increases provided therein.

In 1921-1922, undistributed salaries comprised 59% of the total expenditures; in the year 1924-1925, 50.1%; in the year 1929-1930, 50.3%; in 1934-1935 they rose to 54.1%, and in 1940-1941 they receded again to 53.4%.

It has been the accounting practice of the University to present its expenditures for the purpose of its annual financial statements on the basis of a natural classification. As part of its study of the "uses now being made", the Committee obtained a reclassification under functional headings, having regard to the various instructional departments and faculties, organized research, operating departments and so on. From the classified costs so obtained the revenues from student fees and other sources directly applicable to the functional classifications were then deducted with a view to ascertaining a classified net expenditure of the amount received by the University from the government grant and the Rockefeller Foundation for the year ended March 31, 1941. This study and its supplementary comments are contained as Appendix C to this Report. It may be summarized as follows:

Net Costs for Instructional and Unappropriated Research		
		\$367,381.26

Add: Net Costs of		
1. Department of Extension	\$35,498.47	
2. Organized Research including the Provincial Laboratory, Industrial Laboratories and the Research Council of Alberta	49,146.84	
3. Government of Alberta, Department of Education Summer School Occupancy Costs	<u>7,152.85</u>	<u>91,798.16</u>
		<u>\$459,179.42</u>

Funds Obtained from:		
Government Grant		\$428,000.00
Rockefeller Endowment		12,500.00
Revenue from Operating Departments		<u>17,088.53</u>
		<u>\$457,588.53</u>

Deficit for year		<u><u>\$ 1,590.89</u></u>
------------------	--	---------------------------

The largest revenue from an operating department was that derived from examinations, held partly on behalf of affiliated professional bodies. These operating revenues may be summarized as follows:

Examinations	\$ 8,881.01
Dining Room	5,794.34
Bookstore	4,252.66
Printing	<u>2,495.76</u>
	21,124.27
Less: Loss on Rentals	<u>4,935.74</u>
	<u><u>\$17,088.53</u></u>

It has not been, and should not be, the policy of the University to derive undue revenue from the operations of the bookstore, dining room, and the students' residences. Such a procedure would not tend to bear an even hand as between the

financial interests of various groups of students, and these services should be offered with a view to providing their own costs commensurate with a reasonable margin of safety.

5. Costs per student

A comparison of the instructional and unorganized research costs on a per student basis should be undertaken only with the utmost care and with mental reservations concerning the results so obtained. All the instructional schools and faculties in the University spend a considerable portion of their time and efforts in research and extension activities, calculated not only to assist in instructional functions but also to make a contribution to the welfare of the Province and to the branch of knowledge professed. This is particularly illustrated in the costs of the Faculty of Agriculture, which from time expenditure reports made by its faculty members, finds that its average time is expended in the following ratio:

Teaching	32%
Research	30%
Extension	10%
Administration	<u>28%</u>
Total	<u>100%</u>

If administration costs are proportionately applied to the other three classifications, the following results are obtained:

Teaching	41%
Research	40%
Extension	<u>15%</u>
Total	<u>100%</u>

It is certain that the Faculty of Agriculture spends a much lower proportion of its efforts on instruction than would obtain in other scientific faculties and departments, and a still lower proportion than would obtain in those concerned with the humanities. Nevertheless it would seem as though throughout the University the student as a cost unit may be justified only in the sense that costs do not vary directly in proportion to increased enrollment, and that generally speaking additional students would represent declining costs per student.

Subject to these reservations, the following statement classifies the information contained in Appendix : for the various faculties and schools, showing the number of students in each, and with the addition of the resulting cost per student:

	No. of Students	Costs Contri- buted by Govt. Grant and Rooke- feller Endowment	Costs per Student borne by Government Grant
Arts and Science	595	\$ 65,406.53	\$110.00
Agriculture	161	102,487.19	674.00
Household Economics	82	14,294.37	161.00
Commerce	36	6,485.19	74.00
Applied Science	314	53,911.33	172.00
Law	59	6,368.60	131.00
Medicine	201	56,001.37	279.00
Dentistry	51	14,399.12	283.00
Pharmacy	52	11,068.61	215.00
Nursing	69	14,569.43	176.00
College of Education	125	14,372.46	157.00
Summer School	377	2,496.46	6.00
	<u>2,197</u>	<u>\$367,351.26</u>	

The extraordinarily low cost per summer school student is due to three factors: (a) staff salary expenditures are small, since no part of the regular salaries is charged to the

school, but only the honoraria paid the staff for their extra work; (b) classes are normally large, and revenue from fees correspondingly large; (c) there are few laboratory classes with the higher costs these involve. There is a question, however, as to whether the summer school fees should not be reduced in justice of the students concerned.

6. Comparison with other institutions

Statistical difficulties are necessarily incurred in endeavouring to compare uses being made of the money at this University with other institutions owing to the varying conditions, student enrollments and variations in financial classifications. The Committee, however, referred to the biennial survey of education in the United States by the Federal Security Agency of the United States Office of Education, which classifies the expenditures for 130 publicly controlled American institutions for the years 1935-1936 under administration, instruction, organized research, extension, libraries, and physical plant operation and maintenance. Furthermore by reference to the foregoing survey, a tabulation was made of the costs so classified for ten smaller American institutions with student enrollments varying from 1,900 to 6,800, and for five large institutions with enrollments varying from 14,000 to 20,000 students. An endeavour was also made by reference to the financial statements of four publicly owned Canadian universities to classify the expenditures on a similar basis. This comparison may be summarized as follows:

PERCENT TO TOTAL EXPENDITURES

	139 Publicly Owned American Insti- tutions	10 Publicly Owned Smaller American Insti- tutions	5 Publicly Owned Large American Insti- tutions	4 Publicly Owned Canadian Insti- tutions	Univer- sity of Alberta
Administration	7.7%	8.1%	7.6%	14.3%	8.6%
Instruction	53.1	50.4	53.9	61.1	67.6
Organized Research	8.8	7.7	10.4	2.6	5.8
Extension	15.9	18.7	9.3	3.1	4.0
Libraries	3.1	3.3	4.5	3.3	3.1
Physical Plant Operation and Maintenance	<u>11.4</u>	<u>11.8</u>	<u>14.3</u>	<u>15.6</u>	<u>10.9</u>
Total	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

It is to be expected that the larger institutions would expend a smaller percentage of their available funds on administration and physical plant operation and maintenance, and a somewhat higher percentage on instruction and organized research. It is gratifying to observe, however, that the University of Alberta compares favourably with both Canadian and the smaller American institutions in that it has been able to devote almost 60% of its expenditures for instructional and unorganized research purposes, and that that portion of its expenditures represented by physical plant operation and maintenance and administration has been proportionately lower than that obtaining in other institutions of comparable size. Many American institutions have fallen into the error of over-

expanding their physical plants, with the result that their facilities have sometimes suffered by an over-burden of fixed charges and an inflexibility of financial policy. At this institution there is almost unanimity in the submissions of the various faculties and schools that the work of the University is now suffering through inadequacy of physical facilities, and the submission of the Bursar indicated that unless a planned and co-ordinated repair policy is entered into the efficiency of the physical plant is likely to become seriously impaired. A careful course should therefore be steered between the "scylla" of over-expansion, and the "charybdis" of rapid deterioration and impaired facilities.

Previously in this report reference has been made to a suggestion that the quarter-term system be adopted with a view to accommodating the demands resulting from increasing attendance, as well as the special conditions which will probably obtain after the war. The Committee has not had an opportunity of studying all the advantages and difficulties arising from a change to the quarter system. It is, however, of the opinion that the proposal is compatible with the financial policy which the Committee recommends, namely that additional expenditures as a result of increased enrollments should be such that in the event of decreasing enrollments they may be readily curtailed. A procedure of utilizing physical facilities to the best possible advantage, and meeting increased enrollments by additional expenditures for staff salaries, in so far as it is possible, would seem to constitute the best method

of meeting the special conditions presently expected.

7. Business management

It is the opinion of the Committee that improvement may be made in the statistical organization of the University. There is a tendency which is not uncommon in institutions subject to rapid growth, for each administrative officer to obtain the statistics he specifically requires for his own purpose, without viewing the needs of the organization as a whole, and without correlating the information so obtained with similar or identical information obtained by someone else. It was noticeable that minor changes in the statistical material ordinarily collected would considerably increase their utility from the aspect of financial analysis, and thereby increase without much additional effort the importance and significance of information which it is possible to obtain. Furthermore, the Committee believes that it should be recognized that the President, as chief administrative officer of the University, is fully occupied with the policy and administration of the University in academic matters as well as fulfilling an important public function as a leader in the intellectual life of the Province. Whereas the President should unquestionably be concerned with broad considerations of financial policy and administration, there is need for an executive officer who would be directly charged with responsibility for these matters, and with all matters of detailed administration. Such an officer should be a focal point of statistical and financial data; he should be concerned with the analysis and examination

of financial trends, with the continuous study and comparison of the financial needs and experiences of this University with those of other institutions, and with viewing and developing financial policy. As an immediate executive assistant to the President, he should take his place in making the University a vital force in the welfare of the Province.

8. Returns to the public

The expenditures of public monies should always be considered in relation to the values obtained. There are many of these values, in so far as a university is concerned, which may not be assessed in financial terms. It is not possible to express in dollars and cents the value of six thousand graduates who are occupying important positions in industry and commerce, in professional life, in the arts and in the humanities, in Alberta and throughout the world. Some of them are occupying important positions on advisory boards and committees, and as such are making important contributions to Canada's war effort at this time. It is impossible to assess in dollars and cents the influences of refinement and culture, which are also a product of the monies which have been contributed to the University from public funds. In the field of research, however, it is possible to be more definite. From submissions made to the Committee it is possible to state, for example, that as a result of experiments conducted on cattle feeding about \$300,000 is annually being saved to cattle breeders in the Province; that research in connection with protein, mineral and vitamin requirements of swine is saving in the neighbourhood of

\$1,000,000 per annum; that the production of Red Bobs and Canus wheat, adapted to Alberta conditions, is saving about \$5,000,000 per annum; that investigation into seed treatment has resulted in savings of \$1,000,000 per annum. These are only a few of many projects which are listed in more detail elsewhere in this report, a list of which will convey to the most superficial observer the conviction that University research is representing millions of dollars to the Province each year. The Provincial Laboratory reports that, expressed in terms of commercial fees, it alone makes a contribution running into hundreds of thousands of dollars per annum. In the field of biochemistry the discovery of insulin, in which this University played a part, has saved millions of dollars in renewed health and longer life.

9. Medical education

The Faculty of Medicine, with its associated Schools of Dentistry, Nursing, and Pharmacy, and the Provincial Laboratory, represents the largest financial requirement of the University.

In the Faculty proper, the greatest defect is in hospital facilities for clinical instruction. The University Hospital cannot provide enough teaching beds, and the use of other city hospitals to more than a limited extent seems fraught with difficulties. Teaching needs often call for admitting patients to hospital who do not require hospitalization. Such patients must be given free beds. The University Hospital not only lacks accommodation but, as it operates on a deficit,

the urge is to fill available beds with paying patients. Moreover, a teaching hospital is subject to various added expenses, such as the maintenance of a costly out-patient department. To give the University the required clinical facilities would involve building a new wing to the University Hospital and increasing the annual grant of the University to the University Hospital from its present level of \$17,500 to perhaps \$50,000. There seem to be only two alternatives to the foregoing: (a) to reduce the annual quota of medical students from its present level of 40; (b) to sacrifice the Grade A rating which the Medical Faculty has enjoyed from the outset, and drop to Grade B.

The School of Dentistry is so poorly housed and equipped as to raise serious question regarding the advisability of continuing it unless it can be rehabilitated soon after the war. During war-time dentists are so urgently needed as to make continuance almost imperative. Since, moreover, it is the only Canadian school of dentistry west of Toronto, it should not be closed without very careful consideration. The Alberta Dental Association, in its submission, urged reorganization of the School on a better basis.

The School of Nursing suffers from the general lack of space in the University proper, and still more from crowded conditions at the University Hospital, aggravated by the lack of a nurses' home. Rooming allowances to student nurses total about \$23,000 annually (equal to the interest on an adequate building), and scattered accommodation complicates discipline. Teaching has to be done in cramped quarters in the basement of

the University Hospital, incidentally depriving the Hospital of space for 30 beds.

The School of Pharmacy, while also inadequately housed and equipped, does not present a problem of the same urgency as the three foregoing.

The Provincial Laboratory of Public Health represents the most urgent problem in the whole University. In the 34 years of its existence it has grown to be the largest unit of its kind in Canada, in point of scope and volume of work. It appears to have reached the final limit of its capacity in the present space, and any further pressure of public health service put upon it must almost inevitably lead to a breakdown. Alberta is the only province in which one staff does the work both of the University and of the public health laboratory. This is an economical arrangement, saving the duplication of senior staff salaries. It is also an advantage to the University, in bringing useful clinical material. But at least half the cost of its operation is not properly chargeable to the University. The Survey Committee places expansion of the accommodation for the Provincial Laboratory at the top of its list of priorities.

Medical instruction as a basis for medical services, and the provision of adequate hospital facilities, are rapidly assuming a magnitude and importance which can only be met by a comprehensive state organization. The situation in Alberta is such as to warrant special consideration by the Government.

10. Depression finance

While the Survey Committee feels that unremitting

attention should be given by the University administration to the possibility of effecting economies by better organization and the elimination of any unnecessary or unjustifiable services, it is confronted by the obvious fact that the University has suffered over a period of ten years from insufficient financial support. The ill effects are visible along three lines, relating to (a) plant, (b) staff, and (c) research.

(a) Plant. - Not only has it been impossible to add to building accommodation and facilities in keeping with the growth of the student body, but the existing plant and equipment have deteriorated for lack of proper repairs and upkeep. The seriousness of the over-crowding now existing can scarcely be exaggerated. One class meets regularly in a corridor of the Arts Building. Convocation Hall is unavailable for purposes of assembly during the day as it is used regularly as a drafting laboratory. For years the Department of Horticulture has held no laboratory classes for lack of space. The library has seating accommodation for only a fraction of the students who should be using it. The Provincial Health Laboratory is so over-crowded as to constitute a public danger. These are examples which could be multiplied, the condition being fairly general. The quality of the accommodation is also poor in some cases. For example, the Dental Clinic is housed in quarters in the Medical Building originally intended for storage space. The Department of Poultry is located in a room in the basement of the Power Plant, also intended for storage.

(b) Staff. - A staff salary schedule was set up in

1930 which, as may be seen from Table 1, compares reasonably well with those of other Canadian universities. The schedule included provision for annual increments between the minimum and maximum salary of the rank held. Failure to implement this schedule has had a bad effect on morale. The notion has got abroad that the only way to secure advancement is to look for a better-paid position elsewhere. The situation has been especially hard on the younger men; they took salary cuts with the others, and they suffered in addition the cumulative loss arising from withholding of salary increases within their present rank, and from the deferment of promotion to higher rank. The University cannot afford to lose its good young men; they are its hope for the future.

(c) Research. - A University has not done its full duty when it introduces students to the existing store of knowledge; it should also add to that store. Research has often been called the life blood of an institution of higher learning. Given the interest in students which a good teacher must have, research will keep him up-to-date in his subject, add life to his lectures, and give inspiration to his students. The Provincial Government has maintained a few men on full time industrial research in University laboratories, through grants to the Alberta Research Council, and the Faculty of Agriculture devotes a considerable part of its appropriations to experimentation. With the latter exception, the University has had during the last ten years virtually no funds for the support of research throughout the instructional departments, apart from

Table 1 - Summary of Salaries in a Group of Canadian Universities

Rank	British Columbia	Alberta	Quebec	Manitoba	Western Ontario	Toronto	Osgoode	McGill	Salmon
	Minimum Maximum	Minimum Maximum	Minimum Maximum	Minimum Maximum	Minimum Maximum	Minimum Maximum	Minimum Maximum	Minimum Maximum	Minimum Maximum
President	10,000	8,500	7,000	8,000	7,000	15,000	10,000 10,000	Not fixed	14,000
Dean (Amount added to salary as professor)	2,000	500	500	500	1,000	1,000	1,000	500 2,000	1,000XX
Head of Department	4,000 5,000	4,000 5,000	3,500	3,000 3,500†			4,000 5,000	No special salaries for heads of departments	
Professor	4,000 5,000	4,000 4,500	3,500 4,400	3,000 4,500†	3,000 5,000	4,000 10,000	3,500 4,500	4,000 7,500	3,000 5,000X 4,000 5,000XX
Associate Professor	3,000 3,500	3,400 4,000	2,700 3,500XX	3,000 3,500	3,000 4,500	3,000 4,500	3,000 4,500	5,000 4,500	3,000 3,500X 3,000 4,000XX
Assistant Professor	2,400 3,000	2,700 3,300	2,100 2,500	2,000 2,500	2,000 3,000	2,700 3,400	2,500 3,500	2,400 3,500	2,000 3,000X 2,000 3,000XX
Lecturer		2,000 2,500	500 1,200	1,000 2,000	1,000 2,000	1,000 2,000	1,000 3,000	1,000 3,000	2,000 2,500X 1,000 2,000XX
Instructor	1,000 2,000								
Assistant	Up to 1,500	Up to 2,000	Up to 2,000	Not defined	1,000 2,000	300 1,000	2,000	2,400	Up to 2,000X 1,000 2,000XX

X Arts and Science

XX Professional

XXX Junior Professors

† not a definite salary

those secured from outside sources, for the most part by individual members of the staff on their own initiative. Often it is difficult for the University to provide even the incidental supplies, such as chemicals and glassware, required by these men for their work. It is felt that an annual grant, even a small one, earmarked specifically for the encouragement of research generally throughout the University, would be a thoroughly sound investment by the Province.

The salary position of the sub-professional staff, most of whom come under the jurisdiction of the Bursar, appears on the whole reasonably satisfactory. The Registrar, however, has been unable to implement a salary schedule set up some years ago for records clerks, and complains of the confusion resulting from rapid turn-over in staff, when some degree of permanence is essential to good work. Both Bursar and Registrar ask for more help to keep up with the added burden imposed by a much larger student body than existed when their present staff was authorized. The most pressing need of the sub-professional staff is a pension scheme. Many have now long service, and some have reached the retiring stage with no provision for the future.

Obviously it would not be practicable for any Provincial Government to remedy at once all the financial defects of the University, and the Survey Committee has sought to devise a ten-year programme for overtaking the situation in steps. This is presented in Part IV of this Report. The special problem of meeting the expected inrush of students

immediately after the war has been touched upon in the sections on "Length and arrangement of University session", and on "Junior Colleges".

11. Budgeting

The annual estimates of the University are presented to the Government under four main headings: (a) current account, including clinical services at the Hospital; (b) Public Health Laboratory and Industrial Laboratory; (c) Research Council of Alberta; (d) College of Education.

The second and third of these are properly separated from the first, since they are not chargeable to the cost of instructional work. The College of Education (or the proposed Faculty of Education), however, might well be included in the general vote to all faculties and schools. On the other hand, the Department of Extension might better be shown separately, since it represents a special service, independent of that required for the instruction of intra-mural students. Further, the budget of the Faculty of Agriculture might be split into two parts, one chargeable to the cost of instruction and the other to the cost of operating an experiment station for the general benefit of the farmers of the Province.

These modifications would facilitate consideration of each service on its own merits, and avoid making the teaching budget and the apparent cost of instruction per student fictitiously high.

D. Courses of Study

The Survey Committee was asked to review the courses offered, in relation to the need for them, the ability of the Province to finance them, and the number of students served by each.

The cost of instruction per student naturally tends to vary inversely with the number of students registered. This is especially noticeable in the Faculty of Agriculture, with an enrollment of 156 students out of a total of 2254 registered in 1940-41, and only 114 out of 2037 in 1941-42. The staff of this Faculty also took part in the instruction of students in various short courses, not included in the figures just credited to it. The same staff also operate an agricultural experiment station for the general benefit of the Province. This service, however, is not without particular value to the University students in agriculture, ensuring as it does an available fund of first-hand, up-to-date information of unquestioned local applicability.

The Survey Committee was impressed with the fact that the experimental field and farm equipment of the Faculty of Agriculture is adequate to handle many more students than the lecture room and laboratory accommodation. Indeed, these instructional facilities were seriously taxed by the registration of 156 in 1940-41. While no students have yet been excluded from this faculty for lack of accommodation, such a situation may easily arise in the not distant future unless additional space is provided.

The desirability of cutting the cost of instruction per student and of increasing the number of scientifically trained farmers throughout the Province both point to a need for increased enrollment in Agriculture. The Survey Committee believes the entrance requirements should not be so rigid as to exclude graduates of the Provincial Schools of Agriculture who have shown capacity to profit by higher education. The Committee approves the recent change of curriculum, by which more emphasis is placed on a general course suited to a wide variety of interests.

While the case for higher enrollment seems particularly strong in Agriculture, the same principle applies in other faculties. The desirability of liberalizing both matriculation requirements and courses of study, as means to this end, has been touched upon in Part I of this Report. It brings up, of course, the problem of increased accommodation in all faculties. Already some of the professional faculties (Medicine, Dentistry, Engineering) are operating on quotas made necessary by restrictions of space and other facilities. The desirability of reaching still more people by a greater development of adult education as an extra-mural activity has also been discussed in earlier pages.

The Committee noted a gradual increase in the number of courses offered. While this is to be expected with the growth of the University, not to speak of the expansion of knowledge and the tendency to greater specialization in advanced studies, it is felt that, having regard to the financial

situation in which the University is placed, great care should be exercised before announcing new courses to ascertain that the need for them is clear. Similarly, existing courses should be kept under constant scrutiny with regard to their continued usefulness and applicability.

The Committee noted also that a considerable number of courses have a small registration, perhaps only six or seven students or, in a few cases, even one, two, or three students. These seem at first sight to be wasteful of staff time. For the most part, however, they are advanced courses, taken by honors students, or sometimes by graduate students. Again a number of them take the form of tutorials or conferences - indeed it is only in small classes that this superior form of instruction is practicable. Less time is required by the instructor to prepare for a class of this sort than to prepare a more formal lecture for a large group. Again, the honors and graduate students who profit by these courses are the cream of the student body, and justify a larger investment of state funds upon their education. With all this said, the Committee feels that the University administration might well keep these very small classes under special scrutiny to ensure that they do not become in some instances a source of needless expense.

There seems much to be said in favour of more inter-departmental collaboration in the development of courses which integrate knowledge in the way it must be applied in the world outside. History, Sociology, and Economics form a group which might be enhanced in usefulness by closer association. It may

be necessary to give more freedom to students in electing subjects to build up a general course. The question is raised as to whether students in the Faculty of Law should not include a course in Sociology, to fit them better for their duties in a modern "social-service state". More emphasis might also be placed on combined courses between two faculties, if necessary by modifying their organization to permit of larger enrollment. Commerce and Education, and Commerce and Law, seem promising combinations.

An apparent defect in the curriculum of the University is the lack of close articulation with the subject matter taught in the high schools of the Province. A student progressing from a high school to the University presumably should find opportunity to pursue further the special interests he has discovered in his senior high school work. This he could not always do under present conditions. The Faculty of Agriculture has given considerable attention to the integration of its courses with those of the Provincial Schools of Agriculture, from which it draws part of its students. Even to this faculty, however, a greater number of students come from the high schools.

E. Staff Training and Teaching Loads

A number of submissions made to the Survey Committee stressed the importance of pedagogical training and teaching ability in the staff, as distinct from academic training and knowledge of their subject. A survey of the training of staff members showed that little more than a quarter of their number (40 out of 151) had had the formal pedagogical training such as is required for a teacher's diploma. There is no evidence, however, that this smaller group has achieved greater success in teaching than the remainder of their colleagues. Both groups appear to have about the same proportion of good and indifferent teachers, as far as can be judged by what is known of the results of their work. On the other hand, there is a quite obvious correlation between the inherent ability of individuals and their teaching success. Such a relation is not invariable, since occasionally a man of sound knowledge and good research ability is found who has only restricted aptitude for imparting knowledge to others.

The Committee believes that some training in teaching methods must inevitably be helpful to most younger men who are starting in without much previous experience. The evidence indicates, however, that a capable man will soon overcome in the course of practical experience the handicap represented by a lack of such training. It must be recognized, too, that so long as it is not customary for universities in general to require pedagogical training as a prerequisite to appointment, it is difficult for one university to insist upon it. The

Committee recommends, however, that the University, when making appointments to junior positions, give preference to candidates with such training, other qualifications being approximately equal, and that the teaching progress of all appointees be watched carefully in order to eliminate those who do not show satisfactory aptitude. Further encouragement should be given to younger members of the staff to improve their training in this respect by recognizing courses or diplomas in this field as entitling the members concerned to consideration for advancement in the same way as higher academic degrees in other fields are recognized. The Committee feels that known success in teaching should be included among the prerequisites to appointments or promotion to a senior position, and that lack of success in this essential respect should be considered adequate cause for early retirement.

The academic training of the staff seems in general to be satisfactory. Of the 151 members previously mentioned (a number which excludes demonstrators), 97 had proceeded to the doctorate, 33 had the master's degree, while 16 possessed the bachelor's degree only. Many young men included among the masters and bachelors will doubtless complete their doctorate in due course. Provided all members continue to improve their training and proficiency, no criticism need be offered of the academic standards of the staff.

The Committee approves the institution of the sabbatical year, its main justification being the opportunity it provides for advanced study or refresher courses in other places.

The teaching loads are more difficult to assess. Superficially, a number of instructors who spend less than ten hours per week in the class-room would appear to have a light load. More careful inquiry generally reveals that these men are spending a much larger proportion of time in the preparation of lectures, in reading and criticizing essays and exercises, in conference with students and, in the case of deans and heads of departments, in administrative duties. The members of the Faculty of Agriculture are much occupied with the work of the experiment station, and in extra-mural services. In the Faculty of Medicine a number of the staff have duties in the Hospital and the Provincial Laboratory. A number of men in other faculties carry research programmes financed by external agencies, but of prime significance to the welfare of Alberta. The Committee feels, however, that the distribution of teaching loads should be a matter of frequent review by the University Administration. This seems the more important since, on the other hand, there are some cases in which an overload is quite obvious. These exist, for example, in the Departments of Bacteriology and Pathology, the members of which also carry the responsibility for the Provincial Health Laboratory, and in the Department of Chemistry, which carries the largest number of students.

It must be kept in mind that a university professor should inspire and guide his students to work independently, that it is even more important for his lectures to be stimulating than to be informative. He cannot be expected to achieve this without a reasonable amount of time during the week free for reading

and creative thinking of his own. It may be objected that many professors fall short of this ideal. That can be readily granted. The fact remains that sound policy should be based on making its attainment possible. The Deans of the faculties should recognize and fulfil their responsibility for keeping the entire staff as nearly as possible up to this standard. The President, in turn, should expect from the Deans full information as to the aptitudes and progress of their staff, steps taken to adjust teaching loads, and other matters concerning the duties and welfare of staff members.

7. Activities of the University in Research

Universities have always been the natural home of research. Scholars who are constantly studying the progress of knowledge inevitably find their curiosity awakened with respect to questions still unanswered, and frequently get the urge to fill in some of the gaps. Until comparatively recent times the great bulk of new information was contributed by workers associated with universities.

The twentieth century has, however, seen a great development of research institutions supported by the state or by philanthropic foundations, and of industrial laboratories operated by large corporations. This development was accelerated by the first Great War, which showed the great advantage accruing to nations that mobilized the resources of science, and the same thing is happening again in this war. The equal necessity of scientific backing to industrial success became evident during the highly competitive period between the two wars. So great was the handicap of lack of access to a research laboratory on the part of industries too small to support laboratories individually, that research associations, the modern counterpart of the old trade guilds, grew up in considerable numbers, especially in Great Britain. Governments also came to the aid of small industries by making the facilities of state laboratories available to them, usually on the basis of payment of out-of-pocket costs of any tests or minor investigations they desired to have done. This was what took place in Canada, the National Research Laboratories being established

at Ottawa in 1928.

Agriculture, as an unorganized industry of basic importance to the welfare of the whole people, has always been an object of special solicitude on the part of the state. Agricultural research has, in most countries, increased by leaps and bounds, and it is generally state-supported with the exception of research on special problems associated with expanding the use of industrial products, notably chemical fertilizers, insecticides, and fungicides.

Notwithstanding these state and industrial developments, research in the universities has continued to flourish, and generally to lead the way in fundamental contributions on the pure science side. This is natural, since university men are as a rule less preoccupied than workers in a state or industrial laboratory with getting results whose "practical" applicability is immediately obvious to taxpayers or shareholders. It would be a mistake, however, to assume that the results of research in so-called "pure science" is of less practical importance than the results of research in "applied science". The fundamental knowledge which is the product of pure research is the capital stock of applied research; without the support of the former the latter would soon end in bankruptcy.

Universities must encourage research to save their own souls. A man with progressive interests such as pertain to research is invariably a livelier and better teacher. Conversely, a man who is content to live in the past must shortly end in dullness and futility. These observations are by no

means restricted to research in the physical and biological sciences. They apply equally to research in the humanities and the social sciences.

State universities, such as the University of Alberta, have a double reason for encouraging research. In the University there are normally gathered together a larger body of highly trained men than can be found in any other institution. Advisory consultations between men in related fields is therefore easy. Library facilities are usually good. Much of the laboratory equipment required for research is also required for good teaching. Research is largely a by-product of men who are engaged primarily for teaching, but are willing to work long additional hours at research, because of the interest it brings them. Often the experience of senior men can be more fully utilized, and their capacity greatly increased, by the provision of a little extra equipment and help. Sometimes a laboratory boy, free to care for the routine of an experiment while his master is busy lecturing, can double the output of the master. It is therefore a matter of simple economy that a modern state, with its multiplicity of obligations and technical responsibilities in the development of its resources and industries, should utilize the facilities of its universities to the utmost.

Alberta led the other provinces of Canada in establishing a provincial Research Council in 1919. Its membership included at least two members of the Executive Council of Alberta, the President of the University, and a number of members at

large. Among the latter were representatives of industrial interests and additional representatives of the University. The President of the University was named director of research and a technical advisory committee was set up, which included the heads of various science departments in the University. The headquarters, offices, and laboratories of the Council have always been at the University. The Council thus provided machinery by which the University might act as the research arm of the Provincial Government, in dealing with technical problems in the development of Alberta's industries and resources.

The Council proceeded to prosecute research in two main ways: (1) by setting up a staff of its own, in two divisions dealing respectively with fuels and road materials; (2) by subsidising members of the University instructional staff to make geological and soil surveys, and to investigate problems in the utilisation of natural gas and in the preservation of mine timbers. The work on Alberta coals and bituminous sands was substantial in scale and notable in results. The whole programme was pursued vigorously for some twelve years, but by 1933 the financial depression forced such drastic curtailment in the support of the Council as to reduce its activities to a very low level at which it has since remained.

The Survey Committee believes that the Research Council of Alberta should be revived as an instrument of great potential usefulness in the future development of the resources of the Province. It might easily prove of special value in the difficult period of post-war adjustments.

Another body dedicated to the promotion of research in the University, namely, the Science Association, also came into being in 1919. Unlike the Research Council of Alberta, which has so far restricted its activities to practical problems in the scientific field, the Science Association is catholic in its interests. It is a voluntary organization, established by the staff entirely on their own initiative, in three sections concerned respectively with physical, biological, and social sciences. Individual members of the staff, although interested primarily in the work of one section, hold membership in the Association at large, and commonly attend the meetings of all sections. The Association is thus an important integrating influence in the life of the University, particularly apt in these days when the unity of natural knowledge and the artificial, sometimes obstructive, character of human departmentalism is becoming more evident.

The Science Association at the outset set itself the task of surveying the outstanding problems of the Province, and soon afterwards published a booklet listing these. By regular meetings at which members hear and criticize the research reports of their fellows, the Association has sought to stimulate interest and activity in research. In recent years public lectures and radio talks have been used as means of promoting wider interest and public sympathy. A special committee is charged with the duty of canvassing as occasion arises all opportunities for getting research funds from various sources.

While the comparative penury of recent years has

undoubtedly repressed the research output of the University staff, and even suppressed it entirely in the case of some individuals with heavy loads of teaching and other duties, a creditable amount of good work is still being done. As usual in any group, there are a few rare spirits whom nothing can daunt, who in the most adverse circumstances would still contrive to add something to human knowledge. Others are more easily discouraged by the lack of adequate tools and support. Some find an outlet for their creative ability along other lines, such as the writing of books. A few show little or no interest in the advancement of knowledge; it may be questioned whether these have any proper place in a university.

On the whole, the institution is permeated by a spirit of research, and many members of the staff are making excellent progress with the aid of funds received from outside bodies, notably from the National Research Council of Canada and the Carnegie Corporation. Such grants have already totalled about half a million dollars. Some of the work in the Faculty of Agriculture is assisted by grants from the Dominion Department of Agriculture, and from commercial organizations such as the United Grain Growers Limited and the Alberta Wheat Pool Limited. Agriculture is the only faculty in which a significant part of the Provincial Government grant is devoted to investigational work. An agricultural experiment station of substantial proportions is part of the University plant at Edmonton, and a few branch experimental fields have been established at outlying points, when the nature of the work required tests under different

soil and climatic conditions. For example, a fertilizer testing field has been operated for some years on the grey, wooded soil at Breton, while the drought-resisting properties of new cereal varieties have been observed by growing them on the brown soil at Castor.

Since the founding of the University, its staff members have published over 1,500 papers and books, a number of which have received world-wide attention and acceptance. The scope of the investigations pursued is difficult to indicate briefly, but some idea of their range may be given by listing a dozen topics taken largely at random:

Methods of breeding alfalfa for increased seed-setting.

Relation between iodine in water and occurrence of goitre.

Preparation of fuel oils from Alberta bitumen.

Effect of fertilizers on yield and quality of crops grown on brown, black, gray, and peat soils.

Bacteriology and chemistry of surface taint in butter.

Preparation and action of a hormone from parathyroid glands.

Control of wireworms, cutworms, and wheat-stem sawfly.

Vitamin requirements of growing pigs.

Administrative and financial problems of rural municipalities.

Reasons for occurrence of "frost boils" on Alberta highways.

Forest line and types of vegetation in the Rocky mountains.

The Indo-European language problems.

The value of this cumulative contribution to society can only be suggested by examples. For this purpose reference will be confined to two fields: (a) crop production, (b) the work of the Alberta Research Council.

The University strain of Red Bobs wheat now constitutes over 40% of the provincial wheat acreage. It is especially adapted to the central and northern parts of the Province. Another University production, Canus, is the highest yielding variety in the drier areas of the south and east. It is conservatively estimated that these two wheat varieties have increased the net cash returns of Alberta farmers by at least five million dollars annually.

The introduction to Alberta agriculture of Newal barley, Redwing flax, Altaswede red clover, Swallow timothy, and Perax alfalfa, must collectively represent annual gains equal to that estimated for wheat.

Seed treatments for disease developed at the University, by decreasing losses, have increased the annual revenue of Alberta farmers by at least a million dollars.

An investigation of the drying of tough and damp wheat, completed ten years ago in co-operation with the Universities of Saskatchewan and Manitoba, with the financial support of the National Research Council, led to a reduction in the discount on tough wheat from 6¢ to 2¢ per bushel. Nearly a quarter of the wheat harvested north of Edmonton in 1941 graded tough or damp. The saving of 4¢ per bushel on this quantity must have netted Alberta farmers nearly a million dollars.

In the other field of work, that of the Alberta Research Council, it might be pointed out first that about three million tons of coal were washed at Alberta mines last year, increasing its commercial value and reducing freight charges. This practice had its origin in washing tests made at the University.

The briquetting industry based on research in the Council's laboratories is still small, but growing steadily. By 1940 it had reached an annual value of at least \$100,000.

The bituminous sand industry is also small as yet, but soundly based on the Council's work and with almost limitless possibilities. New wealth created by it annually is now not less than \$1,500,000.

In 1920 and 1921 the expenditure of less than \$1,500 on field and laboratory investigations of iron occurrences in Alberta saved a useless investment of at least ten times that amount.

The report issued on the geology of the Drumheller coal field in 1921 at a cost of about \$3,000 has been a guide to mining operations there since that date.

An investment of about \$1,200 on geological investigations north of Jasper Park in 1932 disclosed the existence of many million tons of high grade gypsum.

The salt industry at Waterways followed directly upon geological work in that district.

A survey of the water resources of the Peace River district, at a cost of about \$5,000, has saved many farmers in

that area wasting money looking for water in the shallow beds where it does not exist.

Many similar examples of equally valuable results from the work of other departments could be cited, but there is no need to labour the point. Attention should be directed, however, to the innumerable small savings, of money, time, or inconvenience, or perhaps of all three, made possible by the existence in the Province of an Agency like the University, to which all sorts of technical inquiries are addressed. No small part of the time of several members of the staff is taken up with answering these inquiries. Many of them, particularly those having to do with industrial developments, are so far-reaching that they cannot be answered without more investigation than the University is at present in a position to make. They should really be dealt with by a reactivated Research Council of Alberta.

Part III

Summary of Recommendations

The University's place in educational system

The Survey Committee recommends:

1. That opportunity be provided for students to obtain at the University the third unit of a foreign language and of mathematics, and the second unit of another science, rather than include these in general matriculation requirements.

2. That matriculation to the proposed Faculty of Education be harmonised as closely as possible with requirements for entrance to the Normal Schools.

3. That the question of credit for shop work in matriculation to the Faculty of Applied Science be explored.

4. That an effort be made to improve the articulation of the subject matter taught, and the methods of instruction, in the high schools of the Province and the University.

5. That as a general principle (to be applied, for example, to Normal School work, University credit be given for work that is relevant to the programme of the degree towards which a student is headed.

6. That the College of Education be given faculty status forthwith, with provision for accommodating different groups of students in courses of various lengths, and with provision for training teachers in the industrial arts, commerce, and household economics.

7. That the proposed Faculty of Education be housed in part of the Edmonton Normal School building, when this becomes available after the war.

8. That if possible greater use be made of the existing University plant by extending the period of the year during which it is in full operation.

9. That the feasibility of the quarter-term system be explored as a method of implementing the foregoing recommendation.

10. That a more systematic effort should be made to inspire students with loyalty and a sense of responsibility towards the University, as a basis for Alumni interest and support.

11. That the Alumni should be built more closely into the structure and life of the University and that, to promote this end, there should be appointed a full-time Alumni Secretary.

12. That as soon as practicable the responsibility for student guidance and for reviewing examination results should be placed under the supervision of a specialist in the science of educational measurement.

13. That the machinery for appeals by students should be simple, adequate, and clearly outlined in the University calendar.

14. That the proposal for a central preliminary school of nursing be re-examined when the necessary additional accommodation can be provided.

The University to serve more people

15. That the work of the University Department of Extension should be expanded by at least one-third.

16. That the staff of the foregoing Department should include a fully qualified instructor in Economics and Sociology.

17. That the public contacts of the staff of other Departments be increased.

18. That for the foregoing purpose more use be made of the radio, but that, to insure a desirable modicum of personal contact, the budget item for travelling expenses of staff members to outlying points in the Province be increased.

19. That as a step towards further development of junior college work, early exploration be made of the feasibility of using for this purpose the combined facilities of the Calgary Normal School and the Provincial Institute of Technology and Art.

20. That to overcome the anomalous situation in which comparative affluence is one of the prerequisites to a university education, every effort should be made to secure more scholarships.

21. That legislative encouragement be given to benefactors to make private endowments and gifts.

Service to agriculture and industry

22. That a small annual grant be earmarked for the encouragement of research, especially in those departments which have not ready access to funds from other sources.

23. That support of research on agricultural problems be continued and, if possible, increased.

24. That the Department of Political Economy be strengthened to make possible the prosecution of studies in farm management and marketing problems.

25. That the Research Council of Alberta be revived as the research arm of the Provincial Government and an instrument of great potential usefulness in the development of the resources of the Province.

26. That the first step in the rehabilitation of the foregoing Council be to provide for the publication of its reports.

27. That the practicability of a small royalty levied on natural products as a means of raising funds for research on the development and utilization of these products be explored.

28. That the provision of more adequate accommodation and other facilities for instruction and research in dairy manufactures be placed well up on the list of expansion priorities.

29. That the present improvised set-up for chemical engineering be replaced when possible by an adequate Department of Chemical Engineering, with petroleum engineering as its central feature.

The University Act

30. That the Board of Governors should be the controlling body in all University affairs.

31. That Alumni representation on the Board should be increased, and that the Deputy Minister of Education and the Deputy Provincial Treasurer should be statutory members.

32. That no appointed member of the Board should hold office for more than six years.

33. That the Board should have power to establish colleges, research laboratories, institutes, experimental stations, radio stations, and other necessary or advantageous activities.

34. That the Senate be reduced in size to make it more effective; that its membership be representative of the various elements of provincial society, including students and Alumni; that it should have the important function of acting as a bridge between the University and the life and activities of the Province; that it should retain such of its present powers and duties as relate to matters with which its members may be expected to be familiar.

35. That the General Faculty Council take over most of the purely academic functions presently discharged by the Senate, including the recommendation to Convocation of the granting of degrees in course.

36. That the other Faculty Councils continue to discharge such academic duties as are appropriate to them.

37. That the Deans' Council be given statutory authority as an advisory and executive body.

38. That the term of office of the Chancellor, and of elected or appointed members of the Senate, be limited to four years.

39. That the President of the Students' Union be a statutory member of the Senate.

40. That a Business Manager or Comptroller, possibly with the title of Vice-President, be appointed to represent the President in the business affairs of the Institution.

41. That the University should have exclusive degree-conferring powers within the Province.

42. That the commercial use of the word "University" or any derivative such as "Varsity", without the consent of the Board, should be prohibited.

43. That the provision of the present University Act, respecting payment of fifty percent of succession duties to the University, being inoperative, should be repealed.

44. That the maximum possible amount of political freedom be accorded to members of the staff.

Internal organisation and administration

45. That the University Administration find an appropriate method of conveying information to the student body respecting the operations of the bookstore, dining room, and other services which concern the students financially.

46. That the Board should ensure to junior members of the teaching staff adequate opportunity to put forward for consideration by Faculty Councils their ideas concerning the work and policies of the University.

Finance

47. That there should be a long-term financial policy; that growth should be steady, to avoid the disruption of services resulting from sudden change; and that new responsibilities

should not be accepted until capacity to finance has been fully explored.

48. That a planned and co-ordinated repair policy be adopted to prevent the efficiency of the physical plant becoming seriously impaired.

49. That a building programme be undertaken to provide more space for departments in urgent need of it.

50. That congestion in the Provincial Laboratory of Public Health is so serious as to demand immediate relief.

51. That to protect the morale of the staff from further deterioration and make it possible to hold the good young men, the salary schedule set up twelve years ago be implemented without further delay.

52. That medical education in its various branches (clinical medicine, dentistry, nursing, pharmacy), together with the Provincial Laboratory of Public Health, presents such a large financial problem as to warrant special consideration by the Government.

53. That the budgeting system should be such as to show separately the estimates for services not chargeable to instruction of intra-mural students.

Courses of study

54. That steps be taken to encourage increased enrolment, both to cut costs per student (especially in the Faculty of Agriculture) and to extend the benefits of university education to more young people.

55. That the usefulness of a liberalised curriculum,

with more freedom to students in electing subjects to build up a general course, be explored.

56. That classes with very small registrations be kept under careful scrutiny to ensure that they do not become a source of unjustifiable expense.

57. That before establishing new courses, great care should be exercised to ascertain that the need for them is clear.

Staff

58. That in making appointments or promotions, the University should give consideration to pedagogical training and teaching ability.

59. That the Administration should make the aptitudes, progress, and teaching loads of the staff the subjects of frequent review.

Part IV

TEN-YEAR PLAN

In the following outline, the financial details of which are summarized in Table 2, the Committee has set out the needs which are plainly evident now. These have been arranged in what appears to the Committee the approximate order of priority. The needs of course may be modified, and the order of priority changed, by events which cannot be foreseen.

While a million-dollar building programme may seem ambitious, even when spread over ten years, it must be remembered that practically no construction has taken place on the campus for twenty years during which the student population nearly doubled. As a result there has developed a condition of congestion so serious as to prejudice the efficiency of the work. True, a war-time decline in registration has set in, but a long-time plan should be based on normal expectations for continued growth, rather than upon fluctuations attributable to abnormal conditions. It should be added that the costs estimated are based upon a decidedly cheaper type of construction than was used in the Arts and Medical Buildings, either of which cost roughly as much as the entire programme now outlined. Care should be taken, however, to see that all buildings are moderately fire-resistant, and the library fire-proof.

Again, the estimated increases in current expenditures seem large, but reference to Figure 2 in Appendix B shows that for the last nine years the Government grant per student has been

abnormally low. Furthermore the expectation of continued growth in student numbers after the war, referred to in connection with the proposed building programmes, must also be taken into account here. If we assume that the rate of growth in student numbers will be equal to that during the ten pre-war years 1929-39, it can be seen in Figure 2 that the corresponding increase in the Government grant should be over \$200,000. On this basis the Committee's estimate of an increase of \$168,200 at the end of the next ten years seems conservative.

A. Building Expansion

1. Complete east wing of Medical Building, to house Provincial Laboratory, Dental Clinic, School of Nursing, and School of Pharmacy.

Estimated capital cost, 1942-43 \$100,000

1943-44 100,000

The transfer of the School of Pharmacy to the foregoing space may be postponed in favour of library reading-room space, more urgently needed, until the completion of Item 2.

2. Complete centre wing of Medical Building, to house temporarily the Library, Department of Extension, School of Household Economics and allow expansion of crowded departments in that building, e.g. Zoology. A model practice house should be part of the development in Household Economics, built separately.

Estimated capital cost, 1944-45 \$100,000

1945-46 90,000

3. House Faculty of Education in part of Edmonton Normal School building as soon as this is released by the Department of National Defence (indicated tentatively in Table 2 as 1945-46).

Estimated capital cost of completing

Normal School \$ 10,000

4. Build new wing at University Hospital to improve clinical facilities. This item is required in order to maintain the Class A rating of the Medical School. It is a joint responsibility of the Department of Public Health and the University.

Estimated capital cost, 1946-47 \$100,000

1947-48 100,000

5. Erect Biological Science Building, to house Faculty of Agriculture (except possibly Departments of Agricultural Engineering and of Dairying, which require engineering type of structure) and Department of Botany.

Estimated capital cost, 1948-49 \$100,000

1949-50 100,000

The Biological Science Building should have attached to it greenhouses for use of the Departments of Botany, Horticulture, Field Crops, and Soils, and animal houses for use of the Department of Animal Science.

6. Erect and equip building to house Department of Chemical Engineering (featuring petroleum engineering).

Estimated capital cost, 1950-51 \$100,000

7. Build Nurses' Home at University Hospital, another joint responsibility of the Department of Public Health and the University.

Proposed capital expenditure, 1951-52 .. \$100,000

(Estimated cost of first unit, \$150,000

of whole project, \$350,000).

The programme under Items 2 and 5, by removing the Department of Extension, the School of Household Economics, and at least a large part of the Faculty of Agriculture, from existing engineering buildings, would afford much-needed room for expansion by the Faculty of Applied Science. The special need of this Faculty for a very large drawing laboratory should be met when the University takes over the drill hall erected in 1941 on the campus by the Air Force. The drill hall should also provide accommodation for Students' Union activities, gymnasium, and for Convocation ceremonies.

The Department of Dairying and of Agricultural Engineering might either expand their temporary quarters in the present engineering buildings or, if a closer study of the needs of the Faculty of Applied Science made this continued inroad on their space appear inadvisable, be transferred to the proposed Biological Science building, with their heavy equipment accommodated in the basement or ground floor.

The developments outlined under Items 1, 2, and 5, by removing the School of Pharmacy, the Library, and the Department of Botany, from the Arts Building, provide adequate additional accommodation for the Faculties of Arts and of Law, the School

of Commerce, and the Administration, for at least a period of years. Eventually a separate administration building will be required.

Part of the estimates in each case are intended to cover the cost of equipping the new buildings and also the cost of amplifying the equipment of departments expanding into the space vacated by those transferred.

After completion of the comparatively intensive building activities outlined, a continuing programme, perhaps on a reduced annual scale, is likely to be required. It will have been observed under Item 2 that a number of departments of the University will still be in temporary, though for the time being adequate, quarters. All of these, as well as the Administration, must expect in due course either to outgrow their temporary quarters or to be pushed out by the expanding needs of departments belonging more properly to the building in question.

It should be added that only major construction items are included in this general programme. There will always be small items to be provided. Examples of needs long pending are an extension of the Work Shop to accommodate the Machine Shop (now occupying valuable instructional space) at an estimated cost of \$2,500; and an Animal House required jointly by the Departments of Biochemistry, Physiology, and Zoology, estimated to cost \$3,000. The usefulness of a large class-room in the Mining Laboratory could be greatly enhanced by insulating it from the noise of ore-dressing machinery in the room below, at an estimated cost of \$3,000. For years, the Department of Soils

has been handicapped in its field experimental work by the lack of a small tractor, with plow and other attachments, which could be bought for \$1,200. The Registrar's office needs card-filing equipment which would cost \$2,000. Other departments have comparable needs. It would seem desirable to meet such needs as they arise, so far as possible, rather than wait till they aggregate a formidable sum. For this purpose the University requires a small capital grant as a regular part of its annual appropriations. A standing item of \$10,000 would seem reasonable.

One substantial item which it seemed impracticable to include in the general ten-year programme without increasing the annual expenditure above the tentative annual limit of \$100,000, is a poultry plant adequate for instructional and research purposes. At present the Department of Poultry makes such use as it can of the provincial poultry plant at Oliver. The field and farm equipment of the Faculty of Agriculture is otherwise reasonably adequate, and when possible should be completed by the addition of a poultry plant at an estimated cost of \$30,000.

B. Maintenance Costs

1. To expand the work of the Department of Extension by about one-third involves increasing its annual appropriations by \$10,000. It is suggested this be done in three annual steps.
2. To enlarge the service of the proposed Faculty of Education it is suggested that its annual appropriation be increased by \$3,500 while it remains in its present cramped quarters, and by \$10,000 after it is established in the Normal School Building.
3. To implement the salary schedule (with no attempt to take up the slack of twelve years) would require, first, \$5,200 per year to bring 12 members of the full-time teaching staff up to the minimum salary of their present ranks and, second, \$8,500 per year to give 35 members an annual increase of \$100. The second item would be cumulative for the period during which the increases were given. This the Committee has estimated as four years.
4. The Medical Advisory Committee and the Hospital Board estimate that to provide adequate clinical facilities, without increasing the deficit of the University Hospital, would involve raising the annual appropriation of the University to the Hospital from its present level of \$17,500 to \$50,000, or a net increase of \$32,500. The Committee suggests reaching the new level in three steps.
5. The Committee supports the Librarian's request for an additional annual grant of \$1,000 for books and periodicals.

6. Modern education cannot be regarded as complete without reference to the science of social living. The Committee recommends the addition to the teaching staff of a lecturer in Sociology, at an initial salary of \$2,100.
7. For the Vice-President proposed by the Committee to represent the President in the statistical organization and business management of the University, a salary of \$6,000 is suggested.
8. The lack of sufficient funds for current repairs to buildings and plant has led to progressive deterioration. Special grants of \$7,000 to \$9,000 over a period of five years, followed by a level annual grant of \$2,000 thereafter, are recommended for use in extraordinary renovations.
9. Additional staff is required in various departments (Library, Chemistry, Mathematics, School of Nursing, Political Economy, Engineering, Law, Agricultural Engineering, Dairying, Entomology, Horticulture). The addition of one instructor per year, at an initial salary of \$2,000, with \$100 increments, is suggested.
10. For additional clerical staff the Committee suggests \$1,000 per year for five years, and \$3,500 per year thereafter.
11. To provide a fund for the encouragement of research the Committee recommends an initial grant of \$2,000, increasing by \$500 annually till a level of \$5,000 is reached.
12. To provide the initial salary of an Alumni Secretary, the Committee recommends a grant of \$2,000 annually. It is hoped this may be supplemented by the Alumni Association as the

appointee merits advancement, and that the Association may also provide the funds required for travelling and other expenses of his office.

13. It is suggested that the Research Council of Alberta should be given \$1,000 immediately to begin publication of its delayed reports, and that its annual grant should be gradually increased to a level \$18,000 above the present one.
14. The Faculty of Agriculture can be of so much direct service to the Province's chief industry, the Committee believes that at least part of the additional programme outlined by that Faculty in its submission should be implemented. For this purpose the Committee recommends increasing its annual appropriation by \$18,000, reached in steps of \$2,000.

TABLE 2.- TEN-YEAR PLAN: PROPOSED INCREASE OVER 1941-42 ESTIMATE OF \$450,000

	1942-43	1943-44	1944-45	1945-46	1946-47	1947-48	1948-49	1949-50	1950-51	1951-52	Total
CAPITAL EXPENDITURES											
1. East wing of Medical Building	100,000	100,000									200,000
2. Centre wing of Medical Building			100,000	90,000							190,000
3. Completing Normal School to house Faculty of Education				10,000							10,000
4. New wing at University Hospital (Jointly with Government)					100,000	100,000					200,000
5. Biological Science Building							100,000	100,000			200,000
6. Chemical and Petroleum Engineering Building									100,000		100,000
7. Nurses' Home at University Hospital (Jointly with Government)										100,000	100,000
Total Capital Expenditures	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,000,000
CURRENT EXPENDITURES											
1. Department of Extension	3,500	7,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	
2. Faculty of Education	3,500	3,500	3,500	10,000	10,000	10,000	10,000	10,000	10,000	10,000	
3. Implement Staff Salary Schedule	5,200	13,700	22,200	30,700	39,200	39,200	39,200	39,200	39,200	39,200	
4. Clinical facilities for Faculty of Medicine	10,000	20,000	32,500	32,500	32,500	32,500	32,500	32,500	32,500	32,500	
5. Library books and periodicals	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
6. Lecturer in Sociology	2,100	2,100	2,200	2,300	2,400	2,500	2,600	2,600	2,700	2,700	
7. Vice-President	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	
8. Extraordinary renovations to buildings and plant	9,200	9,000	6,900	9,000	6,800	2,000	2,000	2,000	2,000	2,000	
9. Library staff and additional teaching staff	1,500	3,500	5,600	7,700	9,800	11,900	14,000	16,100	18,200	18,300	
10. Additional clerical staff in Bursar's and Registrar's offices	1,000	1,000	1,000	1,000	1,000	3,500	3,500	3,500	3,500	3,500	
11. Research Fund	2,000	2,500	3,000	3,500	4,000	4,500	5,000	5,000	5,000	5,000	
12. Alumni Secretary (balance to be paid by Association)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	
13. Research Council of Alberta	1,000	2,000	4,000	6,000	8,000	10,000	14,000	16,000	18,000	18,000	
14. Faculty of Agriculture	2,000	4,000	6,000	8,000	10,000	12,000	14,000	16,000	18,000	18,000	
Total Current Expenditures	50,000	77,300	105,200	129,700	142,700	147,100	155,800	161,900	168,100	168,200	

APPENDIX A

Procedure of Survey, and List of Submissions

In pursuance of instructions received under O.C.1117/41, dated August 7, 1941, the special Committee appointed to conduct a survey of the affairs of the University, met September 12, 1941, to organize its programme and procedure. Subcommittees were set up to study the affairs itemized in the secondary terms of reference, viz.: (a) the University Act, (b) organization and administration, (c) finance, (d) curriculum, (e) staff, (f) research. The Committee as a whole inquired into a variety of other matters coming within the scope of the primary terms of reference, viz.: (a) the place of the University in the educational system of the Province, (b) whether the University can be made to serve more completely the cultural needs of all the people of the Province, (c) whether it is possible to have the University function more effectively in the development of the agricultural and industrial resources of the Province. The Committee's findings on all these matters will be found in this Report.

Submissions were received from the following bodies and officers of the University:

- All faculties and schools
- Department of Extension
- Registrar
- Bursar
- Librarian
- Presman Committee
- Summer Session Committee
- Faculty Relations Committee
- Provincial Laboratories
- Medical Advisory Board
- University Hospital Board
- Alberta Research Council
- Science Association

Alumni Association
Students' Union
Dr. George Hunter and Dr. Geneva Misonor
Dr. H. B. Rawlinson
Dr. D. G. Revell

The foregoing submissions were discussed with their sponsors at University hearings, December 4, 5, and 10, 1941. Inspection visits were made to certain parts of the University premises as opportunity offered.

Submissions were also received from the following organizations and individuals outside the University:

Alberta Association of Registered Nurses
Alberta Co-operative Wholesale Association Limited
Alberta Dairymen's Association
Alberta Dental Association
Alberta Normal School, Edmonton
Alberta Poultry Federation
Alberta School Trustees' Association
Alberta Teachers' Association
Associated Temperance Forces of Alberta
Association of Professional Engineers of Alberta
Calgary Board of Trade
Calgary Normal School
Civil Service Association of Alberta
Credit Union League of Alberta
Edmonton Chamber of Commerce
Edmonton Constituency Social Credit Association
Education Society of Edmonton
Industrial Arts Teachers of Alberta
Provincial Adult Education Association (French Section)
Provincial Institute of Technology and Art
United Farmers of Canada, Alberta Section
University Women's Club
Wawanesa Insurance Company
Dr. W. H. Alexander
Mr. John A. Connelly
Mr. H. C. Fraser
Mr. Bernard V. Gee
Mr. Wm. Rea
Mr. C. A. Renning

Public hearings, of which advance notice was given through the press, were held in Edmonton, November 12 and 13,

1941, at which those who desired to do so were invited to make oral or written submissions, or discuss written submissions presented in advance. Press notice was given of willingness to hold public hearings in Calgary, but the response did not warrant such a proceeding.

APPENDIX B

University History

The Committee believes it will be useful to make brief reference to the history of the University, to provide background and set this Report in perspective.

The University was established by an act of the first session of the first legislature of the Province, in 1906. Dr. Henry Marshall Tory entered upon his duties as first president, January 1, 1908. The Faculty of Arts and Science began classes on September 23 of that year, with four professors and forty-five students, using rented premises in part of the Duggan Street (Queen Alexandra) public school. The next year it transferred to quarters in the Strathcona High School.

A new University Act was passed in 1910, establishing the form of government which has remained substantially unaltered to the present. The business management of the University is in the hands of the Board of Governors and its academic affairs in charge of the Senate. The Act specifies certain ex officio members of both bodies. Apart from these, members of the Board are appointed by the Lieutenant Governor in Council, and members of the Senate, for the most part, are elected either by Convocation (which consists mainly of the University Alumni) or by various professional bodies.

In the fall of 1911, the University moved to its own campus, the first permanent building, Athabasca Hall, being ready for occupancy. This was the first of three residences

completed by 1914, and used at first in part for teaching purposes. The Arts Building was occupied in 1915, the Engineering Laboratories in 1919, and the Medical Building in 1921. Since that date there have been no additions to the permanent plant of the University proper. The University acquired the Strathcona Hospital in 1922, and retained it until 1929, when it was turned over to the Provincial Government. It has continued to operate as the University Hospital under a joint board of the Government and the University.

The University developed its educational services with great rapidity, as shown by the following chronology:

Faculty of Arts and Science	1908
Department of Extension	1912
Faculty of Law	1912
Faculty of Applied Science	1913
Faculty of Medicine	1913
Faculty of Agriculture	1913
School of Dentistry	1917
School of Pharmacy	1917
School of Nursing	1924
School of Commerce	1923
School (later College) of Education	1923 (1930)
School of Household Economics	1923

It will be noticed that the Department of Extension was organized very early in the history of the University, for the purpose of reaching out to the people at large, bringing to them such of the fruits of intellectual activity as might be disseminated by the means available. Much favourable comment on the success of this effort has been included in submissions made to the Survey Committee by various public bodies, which, however, ask in general for an expansion of extension activities. The Faculty of Agriculture has also been singled



THE FIGURES PLOTTED ON EACH VERTICAL LINE ARE FOR A PERIOD LYING IN THE YEARS SHOWN ON EACH SIDE OF THE VERTICAL LINE.

THE ACTUAL PERIODS ARE AS FOLLOWS, -

REGISTRATION -	JULY 1 ST TO JUNE 30 TH	
GRANT —	JULY 1 ST (1907) TO JUNE 30 TH (1927)	IN TRANSITION PERIODS, PROPORTIONAL ANNUAL AMOUNTS PLOTTED
	JAN. 1 ST * (1916) TO DEC. 31 ST (1927)	
	APR. 1 ST (1928) TO MARCH 31 ST (PRESENT)	

* SUBTRACT ONE DAY FOR PLOTTING

Figure 2

ANNUAL - STUDENT * REGISTRATION
AND
ANNUAL * GOVERNMENT * GRANT

UNIVERSITY OF ALBERTA

out for special mention with reference to its public services, supplementary to formal instruction within the University.

The student body increased rapidly from 45 in 1908-09 to a maximum of 2327 in 1939-40. The annual registrations during the life of the University are charted in Figure 2. The effect of the two wars can be seen in this graph. During the first Great War the registration dropped from a high of 489 in 1914-15 to a low of 306 in 1916-17. During the present war the trend has again been downhill. In the current year, 1941-42, the decrease as compared with last year is 9.17%. In 669 American universities and colleges the corresponding average decrease this year is 9.62%. Enlistments and enhanced employment demand are the twin causes of this slump in attendance. It seems likely to continue as long as the war situation remains acute. The very rapid increase at the close of the last war is significant. This also must be expected to occur again, probably to an even greater degree, in view of the liberal provision made by the Dominion Government for the support of demobilized students.

In Figure 2 there are charted also the annual maintenance grants of the Provincial Government to the University. One square on the vertical scale represents \$25,000 and 100 students. The close association of the lines during the first few years thus indicates a Government grant of roughly \$250 per student. With the establishment in 1913 of professional faculties requiring expensive laboratory instruction, the grant per student rose rapidly to about \$350 per student. During the depression it dropped to less than \$200 per student.

The practical significance of the history portrayed by Figure 2 is discussed in the section of this Report dealing with "University Finance". The fact already mentioned, that there have been no additions to the physical plant of the University for twenty years during which the student population practically doubled, and the discrepancy between student registration and Government grants in the last nine years, undoubtedly account for many of the present ills of the University.

Contributions to Science and Letters

The foregoing historical sketch has been designedly brief, touching only such points as seemed necessary to the purpose of this Report, since adequate treatments of the University's history and contributions to society are already available. On the completion of twenty-five years of service, a booklet entitled, "The University of Alberta, 1908-1933", was published through the instrumentality of the General Faculty Council. At the same time a series of lectures dealing with the development of thought in various fields and the philosophy of education during the life of the University was issued in book form under the title, "These Twenty-Five Years". Two articles entitled, "The University: A Laboratory for Alberta", and "The Place of the University in our Scheme of Education", both published in "The Trail", December, 1941, serve to bring up-to-date the account of the University's place in the life of the Province.

These documents, historical and critical, make it clear that, whatever shortcomings the University may have still to overtake, its influence already extends far beyond its own walls. Indeed it is favourably known on this and other continents for its contributions to science and letters, as well as for the quality of its graduates.

APPENDIX C

Costs of Various Services, Distributed to Sources of Revenue

Method of computing costs

1. Costs were first divided into six main cost divisions, namely:

- (a) Direct instruction and unappropriated research
- (b) Library
- (c) Physical education
- (d) Direct administration and general
- (e) Indirect administration and general
- (f) Building occupancy and maintenance.

2. Division (a) "direct instruction and unappropriated research" comprised those costs which could not be directly applied to an instructional department, and included such items as salaries, pensions, salaries and wages of laboratory assistants, wages of field workers in the case of agricultural departments, and direct laboratory expenses. In some instances these costs were subject to reduction by direct revenue such as the sales of the Animal Husbandry Department, the Horticultural Department, and so on.
3. Where the direct costs of a teaching department were wholly contained in a specific faculty or school they were so distributed. For instance, the Department of Animal Husbandry offers courses only to agricultural students, and its costs were immediately applied to that faculty. Furthermore other direct costs were directly applied to faculties and schools such as the salary and pension of the Dean of Agriculture, costs of the medical clinic to the Medical Faculty, and so on. In other instances,

however, departmental costs were distributed over faculties or schools in ratio of student hours. For instance the Department of Chemistry offers courses to students in Arts, Medicine, Dentistry, Applied Science and so on. In such an instance the total costs of the Department of Chemistry were first ascertained. Then the instructional cost of each course was derived by prorating the total cost on the basis of student hours, thus giving recognition to the number of hours per week each course was offered, the number of students in each, and the fact that certain departmental administrative expenses should be borne by all courses offered in a department. The cost per course so ascertained was then applied to the respective faculties and schools in the ratio of students registered in each course.

4. The mechanical difficulties incurred at this stage were substantial. The Registrar's office maintains only:

- (a) registration of students writing examinations,
- (b) registration of students in each instructional department,
- (c) registration of students in faculties.

For the purpose of this study it was necessary to know the number of students in each course registered in each faculty or school. To analyze the statistics for this purpose one man worked steadily for three weeks.

5. The next step was to distribute over faculties and schools the cost of library and physical education, in the ratio of the number of students in each, except that

the summer school bore no part of the cost of physical education as it would not seem to have benefitted from this service. In distributing library costs, recognition was given to the variation in length of term between summer school and winter session: six weeks for summer school students, 25.6 weeks for winter session students. Furthermore it was also recognized that the library is not used to the same extent by summer school students. For the purpose of this distribution winter and summer school students were weighted as five to one.

6. The next step was to distribute the cost of direct administration and general expenses. Cost of the Deans and Deans' offices were either applied directly to a faculty or divided in the ratio of students where a number of schools were contained in a faculty. The direct administration of the Department of Extension, Provincial and Industrial Laboratories, research, operating departments and so on, were directly applied and included the direct salary costs, stationery, printing, travelling, etc., applicable to those departments.
7. The technique under (6) disposed of the larger portion of administrative expenses. There still remained, however, certain "over all" administration expenses such as the President's office and the Bursar's office, which could not be applied directly to any particular faculty or school, and which in fact served the operating and research departments and the Department of Extension. These costs were

assembled and after discussion with the Acting President and the Bursar that portion representing the amount of time and services offered to the Department of Extension, operating departments and the organized research departments, were deleted and applied. The amount remaining plus the costs only applicable to faculties, degrees and schools, (such as the Registrar's and Provost's offices) were distributed in the ratio of students in each faculty or school. Here again weight was given to the summer school on the basis of one to five.

8. This left the cost of building occupancy and maintenance. The direct costs of building repairs and grounds maintenance were firstly distributed over the respective buildings, and ⁱⁿ direct costs were then distributed on a similar ratio. Consideration was then given to the amount of space occupied by each of the operating and other departments in each building. For instance, the Department of Extension occupies one-third of the double laboratory building, and the Provincial Laboratory one-sixteenth of the Medical Building. These departments were accordingly charged a proper proportion of the occupancy costs of their respective buildings. Power plant expenses were distributed on the basis of radiation. Thus the Department of Extension uses 1,132 feet out of a total of 94,800, and it bears a portion of power plant expenses in that ratio. Insurance was distributed in the ratio of risk carried. Having made these distributions, the residual occupancy

costs constituting those applicable to faculties and schools were then divided over the respective faculties and schools in the ratio of students registered in each. Here again consideration was given to the situation obtaining with respect to the University Summer School and the summer school operated by the Department of Education. Recognition was again given to the variation in sizes of the term, and also to the lower heating costs in the summer months, and one-sixth of residual occupancy costs were applied to summer school costs and five-sixths to the faculties and schools offering winter term courses. The winter term portion was then divided over faculties and schools in the ratio of students registered in each; the summer school portion was divided between the University Summer School and the Department of Education Summer School on a student registration basis, giving a weighting of six to University students and five to Department of Education students in recognition of the variations in lengths of the terms of six and five weeks respectively.

9. Where possible, the revenue from student fees was ascertained directly for each faculty or school. In some instances, however, such items as registration fees, library fees and so on were apportioned in the ratio of student registration. Recognition was given to special circumstances, such as the College of Education charging only \$2.50 library fees, summer school \$1.00 library fees, whereas other students are charged \$5.00 library fees.

The revenue of the Department of Extension and Provincial and Industrial Laboratories were directly applied as were the sales of the operating departments.

This is all summarized in Table 3, herewith.

[illegible]

FOR LIBRARY USE ONLY

4F255

C

University of Alberta Library



0 1620 0457 2077